
EVALUATING THE COMMUNITY TECHNOLOGY TRAINING PROGRAM

AT REAGAN AND TRAVIS HIGH SCHOOLS

May, 2001

Report prepared by the **Telecommunications and Information Policy Institute**

University of Texas at Austin, 78712

(512) 471-5826

www.utexas.edu/research/tipi

Sharon Stover and Joe Straubhaar, Principal Investigators

Zeynep Tufekcioglu, Research Associate



Table of Contents

LIST OF TABLES.....	IV
I. EXECUTIVE SUMMARY.....	1
II. OVERVIEW OF THE PROGRAM	4
A. Structure of the CTTC program at Reagan	5
B. Program Procedures.....	6
C. Infrastructure and Resources.....	6
Site Coordinator	7
Classes.....	7
Instructors.....	7
Interns.....	9
Volunteers	11
Labs	11
III. EVALUATION ACTIVITIES.....	14
A. Travis High School Program.....	14
Observations at Travis High.....	14
Travis as a baseline setting.....	14
Evaluation Research Activities	15
B. Reagan High Program.....	15
Evaluation Research Activities	15
Interviews with CTTC staff.....	17

Informal discussions with all program participants (N=45).....	17
C. Database analysis.....	17
IV. FINDINGS	22
A. Processing Applicants	22
Orientation.....	22
Assessment of Participants.....	23
Processing of Participants	30
Interactions with the School.....	32
B. Findings at Travis.....	34
C. Findings at Reagan.....	34
Intro Class	34
Composition of the Intro Class	35
Content in the Intro Class.....	36
Beginner Class.....	38
Beginner Class Composition.....	39
Beginner Class Content.....	40
Intermediate Class	42
Intermediate Class Composition	43
Intermediate Class Content	44
V. ISSUES AND RECOMMENDATIONS.....	46
Skill Levels and Speed	46

Rearranging the use of time	47
Database	48
Interns	49
Technical Issues.....	50
Student Flow Through the System	51
APPENDIX A: CTTC BEGINNER LEVEL ASSESSMENT / FINAL PROJECT	54
APPENDIX B: BEGINNER CLASS GOAL OUTLINE.....	55
APPENDIX C: CTTC INTERMEDIATE CLASS FINAL PROJECT.....	59
APPENDIX D: QUESTIONNAIRES USED FOR INTERVIEWS.....	61
Technology Training Evaluation Project – Questions at the Intro Level.....	61
Technology Training Evaluation Project – Questions at the Intermediate Level.....	65
Questions for Site Coordinator	71

List of Tables

Table 1 Austin Independent School District TAAS* Scores	5
Table 2 Gender and Ethnicity of the CTTC Clients.....	18
Table 3 Gender, Ethnicity And Income Of CTTC Clients.....	18
Table 4 Beginner Class Completion Rate	19
Table 5 Intermediate Class Completion.....	20
Table 6 Workforce Characteristics of Participants	21
Table 7 Educational Background of Participants.....	21
Table 8 Intro Level Questions.....	25
Table 9 Beginner Level Assessment Questions	25
Table 10 Intermediate Level Assessment Questions.....	26
Table 11 Assessment Questions for Education and English	29
Table 12 Results of Attempted Contact with Participants	32
Table 13 Skills to be Acquired at the Close of the Beginning Class	40

I. Executive Summary

This report documents and evaluates the launch of the Community Technology and Training Center (CTTC) program at Reagan High School in Austin Texas. It references some of the processes and accomplishments of the CTTC program at its founding site, Travis High School, as well. Funded in part by a grant from the US Department of Education, the CTTC program has established free computer training opportunities in the community, particularly targeting people who wish to retrain themselves or acquire computer skills in order to work in the technology sector. The model at the two high schools is similar, and this report both describes the basic operations of the programs and seeks to identify the successful and less successful aspects of the program. The broader CTTC effort attempts to involve the many constituencies in the Austin region who share similar computer training/literacy goals and to streamline communication so that the community-wide endeavor maximizes opportunities and allows collaborations to flourish. Using the information technology environment to improve the linkage among all sorts of services and all sorts of communities is an umbrella goal for the CTTC project that informs many of its undertakings. This evaluation, however, focuses only on the programs at the high schools.

Among our observations are the following broad, summary points.

- At both sites, after-school and weekend computer training programs have been launched successfully.

Indeed, the people who have participated in the classes number approximately 900 over the two years CTTC has existed (the Reagan operation has been ongoing only for about five months at this writing). Classes include 26 Beginner, 18 Intermediate, and several Advanced courses.

- The program has developed useful procedures and teaching formulas.

However, certain relationships within the schools are problematic.

CTTC's mode of interacting with schools has effectively broadened the reach of the school setting to a larger, diverse constituency. More people go to the schools, and that use extends well beyond the 8-4 school day. By offering the schools better facilities (particularly improved Internet connectivity), the program has enhanced the educational infrastructure, and created a win-win environment in which both normal high school operations and the CTTC's after-school operations can avail themselves of good, up-to-date equipment. The CTTC program also has brought more local industry interest to the schools as well insofar as businesses sponsor some of the CTTC's equipment investments and programs. However, the shared use of facilities is not without some trouble areas. Technical configuration issues and uncertainties regarding control over facilities have created some friction.

- Roughly two thirds of the program's students have been female, and about 45% are Hispanic, 36% Anglo, and 14% African American. About 36% were unemployed when they took the courses.

The program successfully attracted the interest in minority and lower income populations in the region. Women outnumber men in most classes, and most appear to believe their future career success hinges to some extent on understanding how to use computers.

- The program has used volunteer labor effectively, including that of talented high school students willing to "give back" to the community.

Travis and Reagan High School student have participated in the CTTC classes as interns, and they add a great deal to the program. They clearly enjoy helping, and they are a

crucial element of the program, particularly insofar as they often possess excellent technical skills and “in the field” operating knowledge of their school computer network systems. However, as is detailed below, interns’ roles in the program may be improved.

- The class topics vary, with a heavy complement of beginner courses but also some very advanced courses in such subjects as Linux and HTML.

There are numerous beginner classes in the program, although the program personnel report that there always is a need for more classes that can be conducted in Spanish (about 22% of the program participants have a native language other than English). The schedule also illustrates some “holes” in advanced applications software options (e.g., spreadsheet programs, database management programs, etc.). There are various reasons for this, which are discussed later in this report.

- Moving students through an individual class, and through a larger program of courses, is not a straightforward process.

The program uses an assessment tool to place students in an appropriate class, but that tool is not without some flaws. Consequently, the skills levels of students in the same class can vary quite a bit. Additionally, the classes are offered in the evening and on weekends, when the facilities are available and when most peoples’ jobs are finished. For people with jobs, this creates a grueling schedule. Time constraints and skills heterogeneity pose challenges for using class time optimally. Even simply contacting students to inform them of course availability proves to be onerous and at times haphazard.

- Using a database to gather information about students and their progress provides useful feedback to the program. However, there are many ways in which the database can be improved.

This community-based program is distinctive in its early focus on measurable outcomes and on gathering data in order to demonstrate its operations and effectiveness. However, the database has changed over its lifetime, and some of the processes necessary to maintain internal consistency have lapsed. The program is adopting a new, computer-based data-gathering system that should improve the usability of its database.

This young program is still undergoing growing pains, and one of the goals of this evaluation is to identify and analyze some of those pains. At the same time, we document the program's operations and its successes. As this is the first year of what will be a three-year evaluation effort, our scope is relatively narrow in this report, but we expect it to broaden during our second year of analysis.

II. Overview of the program

The Communications Technology and Training Center operations are comprised of (1) the staff who work within the program as well as those supporting it in the facilities shared with the local high schools; (2) the curriculum and models – software, in a sense - that orient students and instructors to each other and that establish the training routines; and (3) the technical infrastructure, also shared between the program and the Independent School District, including computers, local area networks, and Internet connectivity.

A. Structure of the CTTC program at Reagan

The Community Technology and Training Center program at Reagan High School was started in February 2000 following two years of operation at Travis High School. Both of these high schools are located near or in mostly poor and/or minority populations. Both of the high schools are in the Austin Independent School District, and both often have the lowest TAAS scores in AISD – 10th for Travis and 11th for Reagan. The student population both schools is composed of mostly minority students.

Table 1 Austin Independent School District TAAS* Scores

AUSTIN ISD			
Campus	2001 (% passing)	2000 (% passing)	Rank (2001)
Anderson	93	86	1
McCallum	89	88	2
Bowie	88	87	3
Austin	85	86	4
Johnson	73	77	5
Crockett	68	68	6
Akins	62	NS	7
Lanier	59	56	8
Johnston	53	60	9
Travis	51	61	10
Reagan	46	54	11

*Texas Assessment of Academic Skills

Programs at both locations are operated under the same model and taught by the same teachers, although it is expected that some teachers will, over time, start teaching

primarily at one or the other location due to the proximity to their homes or day-activities.

B. Program Procedures

The program recruits students from a variety of sources, including referrals from the Texas Workforce Commission, news stories (local channels Fox 7 and Channel 8 have produced several), the program website (www.catf-austin.org/cttc), informational brochures placed in the high schools, word of mouth, and so forth.

Students may choose from various levels of training or may choose to use the lab facilities at their leisure for independent study during the hours that the CTTCs are open. Classes are held in the evenings, Monday through Thursday from 6pm to 9pm. The drop-in hours are Monday through Thursday from 6 to 9pm and Saturday 1 to 5pm in both locations. During the summer the schedule varies, and the program is able to offer Saturday and daytime classes.

A prospective student has to attend an orientation session that lasts one to two hours. Orientation sessions are held at both locations at least once a month in each location, the second Thursday of each month at Travis High School and the last Saturday of each month at Reagan High School. This will be discussed more in detail later.

C. Infrastructure and Resources

The CTTC team consists of a site coordinator, numerous instructors, paid high school interns, and volunteers. Each role carries with it certain responsibilities, as detailed below. The Reagan program had just begun its operations during this evaluation period, and its staff was working out their procedures and means of staying coordinated.

Site Coordinator

Both sites employ a site coordinator who is responsible for overall operations of the site, coordination with the high schools, smooth operations during recruitment and training, and the training and evaluation of staff members and volunteers. In Travis this position is occupied by Frieda Gress and in Reagan by Leroy Smith. The site coordinator often acts as the ultimate authority in resolving any local issues that may come up. Site coordinators are often present for at least a portion of the time during class and during drop-in hours.

Classes

There are evening classes available to participants during the school term and daytime and evening classes during the summer. The CTTC classes are coordinated with the school hours so that students have mostly left the school premises before CTTC classes begin.

Instructors

Classes are taught by instructors responsible for following the curriculum and for establishing the day-to-day activities with all the students. The instructors develop a “first name” relationship with the students, as most classes take a substantial amount of time (four weeks). Both beginner and intermediate level classes meet four times a week for those four weeks, and the instructor comes to represent the program for the students. Instructors have to be qualified not only in the subject that they are teaching but also in the art of teaching an adult population with diverse levels of skills, education and background. Most students are being exposed to material in which they have very little

competence or prior experience. On top of it all, most of the students come to these classes after a full day at work and thus may be tired.

Dealing with computers, with all their quirks and problems, is a source of frustration for many people in the classes, which makes the role of the instructor even more important. On the positive side, most people who attend these classes are very eager to learn, as they believe the lack of computer literacy has been a problem that has caused them to lose job opportunities and income. During interviews between January 29th and February 1st participants at Intro 01-02 class expressed their motivations in statements such as the following:

“I need a job therefore I need computer skills.”

“You can’t even work in a warehouse without knowing something about these machines these days.”

“I want a better job. I want to be able to help my daughter with her school work.”

“It’s time for me to move into the 21st century.”

They appear to be very grateful for the opportunity to take these classes and they are often very enthusiastic about the program. At the end of the Intermediate class in May, one of the participants who had expressed “feeling like an idiot” in January elatedly related an incident at a computer shop (Best Buy) he had gone to in trying to purchase software. He stated, “I tried to ask those kids who are supposed to help you. They knew less than I did. Can you believe that, I know more than them. I don’t feel stupid anymore, I knew I wasn’t stupid. I knew it.”

The instructor's role is critical. Most people come into the class scared, disadvantaged and frustrated. One participant in the Intro class in January expressed that he had avoided asking people for help in his office because "he would appear stupid." In interviews between January 29th and February 1st participants often stated that they were "scared of breaking the machine," "afraid of doing something wrong" and "appearing like an idiot." Due to these apprehensions, the personal tone set by the instructor makes a large difference, especially in the beginning levels, above and beyond any issues of competence about the material taught.

Interns

CTTC employs three interns at the Reagan High School location and four interns at the Travis High School location. The interns are all high school students at either school with the exception of one who used to be a student at Travis High School but is now a student at Del Valle High. The idea of hiring high school students as interns apparently came up as a suggestion from one of the teachers at Travis High School who had taught an after-hours class in Travis High providing hands-on computer training to a few students. The model worked, and now student interns are the backbone of the CTTC program, especially from a technical point of view.

The interns are often the most knowledgeable people around. This researcher has witnessed many occasions when the instructor got stuck on a technical question and asked the intern for help. They provide most of the network upkeep, solve problems as they arise and answer individual questions from students and assist them in their work, especially during times when they are assigned to independent study.

The interns vary in age but most of them are juniors and seniors in High School. In many opportunities for discussion this researcher has had, as well as in three semi-structured interviews, the student-interns clearly expressed pleasure and satisfaction about being involved with the program. They commonly expressed being unsatisfied, bored, frustrated with their regular schools, classes and teachers. Although all of them are clearly bright and possess a good work ethic (as the program demands anywhere from 15 to 25 hours of their time a week), they are not particularly “good” students with high grade point averages.

All of the interns interviewed expressed that initially they found it very frustrating to teach adults who seemed to learn things in a way that was different from the way the interns expected them to. Statements made by the interns included: “I would go home and be very frustrated that I had to say the same thing to the same people over and over again everyday,” “I would wonder why they could not follow the instructions that were right in front of them,” “I just picked up and learned, but they don’t.” In the end, they all stated that they realized that these people were going to learn a different way. “I learned how to try to explain things in a way they would understand,” “I learned to be patient.”

The interns appeared to be helpful, patient and very supportive of the adult-students; for example, it was common for interns to help students when a problem arose. Their degree of patience and perseverance is quite remarkable considering that these are high-school students, all boys, sitting through classes covering material with which they are thoroughly familiar, and answering questions that they have probably answered many times before.

The interns get paid \$7.50 an hour, a good rate for a high school student but clearly very much below their market value in a city like Austin. It appears to be a mutually advantageous situation: the interns get paid relatively well to work in their own school doing a highly gratifying job that makes a difference, with a level of responsibility that the adult world rarely provides them; the CTTC program has a relatively steady supply of labor at rates otherwise unavailable to them.

The formula is not foolproof, and a great deal of care must be taken in choosing and monitoring the student interns.

Volunteers

This researcher has not had any direct interactions with volunteers. Throughout the observation periods no volunteers were observed teaching classes or providing help. The researcher has attended a volunteer orientation meeting but at this time there is not enough observational data to say anything of value. Project staff report that there are volunteers from a local university (Southwest Texas) helping with the web class and in some other capacities during the spring of 2001. More volunteer activity occurs in advanced classes (which were not observed). Many volunteers helped to install the equipment in the schools as well over intensive “cable pulling” weekends.

Labs

Both locations provide fairly current computers in networked environments. They both provide access to typing tutor programs as well as Microsoft Office programs. Students must log in using a personally assigned login name and password. The instructor has a computer that is hooked up to a projector screen.

In both locations, the CTTC program has brought in, or thoroughly updated, the existing computer infrastructure. In Travis, they have provided 45 computers and two servers in a Novell Network environment. In Reagan High School, the CTTC program donated around 32 computers, upgraded 60 computers, installed two servers and also provided high-speed Internet access. Before the introduction of the CTTC to Reagan High School, Internet access was available only to a few teachers in their own offices. CTTC has used its funds, donations, staff and volunteer energy to both wire and maintain both sites.

Technical questions may appear to be background issues that may be ignored, or dropped from the priority list, once the technology has been acquired and installed. However, that is far from truth. Running a networked environment requires constant maintenance and attention. Currently both programs appear to have stable networked environments that rarely present problems; however, there are problems brewing, especially the Travis site, that will require the organization to find a way of working with the schools on an ongoing basis regarding network maintenance.

The crux of the problem has to do with using shared space and shared resources. The labs are shared with the schools, which utilize them during the day. The physical space belongs to and is controlled by the schools, and they sometimes have different priorities and levels of competence in terms of the maintenance of the network. This is a major issue in Travis High School where in early 2001 there appears to be nobody technically competent who is responsible for the maintenance of the network on the part of the school. The network in Travis High is a Novell Version 5.0 Network system that runs on the principle of “clone” machines. A snapshot of hard disk of the workstation set

up in the desired manner is taken and stored at a central server. If at any point problems arise at a local station - and they do arise in a network where high school students are allowed access to directory functions - the system administrator can simply discard the modified workstation's hard disk and replace it with the original snapshot. This process is quick and efficient, sidestepping the cumbersome alternative way of correcting modifications on a workstation which can involve reinstalling MS Windows and all relevant programs, configuring hardware, and so forth. Since most machines are clones of each other, students can use any machine that happens to be free without worrying about machine-specific differences.

Novell 5.0 Network also allows an efficient method of controlling access and authority by allowing the system administrators to define categories of users with specific authorizations and then creating users who are "instances" of that particular category. For example, a beginner class profile may include authorization to access MS Office and Games but not the Control Panel. In any case, problem machines can be fixed by restoring the cloned copy, a process that is very fast and thus allows classes to continue without too many disruptions.

However, the network system may be corrupted by incompetent system administrators or by reduced maintenance, which would allow problems to accumulate over time. The site coordinator at Travis has explained that they have been having problems convincing the school administration to allow the CTTC program staff to have access to even the physical infrastructure. During periodic visits to Travis High School over the course of three months, we often heard people asking "did we get the server closet keys yet?" Apparently, the school denied, and then delayed, CTTC the keys to the

server closet which contain the machines that are essential for operating the network. In late April 2001 the server keys did become available to CTTC.

In Reagan High School, the Network is Windows 2000.

III. Evaluation Activities

The research activities for the evaluation took place in both Travis and Reagan High Schools, the former being used as a point of comparison for the new program at Reagan. This section details the types of activities that comprised the data gathering and the range of the program activities that were observed during Spring, 2001. Most data were gathered through observation of classes, field interviews with program staff, participants and teachers in the schools, and examining the CTTC database.

A. Travis High School Program

Observations at Travis High

Travis as a baseline setting

Travis has an established program that has served about 830 participants¹ over the course of two years. In many ways Reagan High School is, at least during these initial stages, duplicating the structure found at Travis High School, and has served about 100 people in its first four months. The instructors who teach at Reagan have been trained at Travis or have taught classes at Travis. In addition, many people who attend classes at Reagan have attended orientation or other classes at Travis High. The curriculum is

¹ The CTTC program generally terms the students in the program “clients.” Here we use the word student or participant. This refers to people who have attended at least a significant component of the class.

identical in both places. Thus, observations were carried out at Travis High School in order to establish a baseline and to gauge the scope of the program.

Evaluation Research Activities

At Travis the research consisted of repeated visits during drop-in hours, interviews with the site coordinator and interns and attending staff and volunteer orientation meetings. No formal classes were attended in Travis as these met at the same time as those in Reagan High School. The most important lesson from Travis High School as far as Reagan High School is concerned has to do with the possible problems that may arise between the CTTC and the school administration, problems that may adversely affect the viability of the program. The model developed at Travis with respect to establishing computers and a network, publicizing classes, conducting orientations and the actual classes, and working with the school personnel is largely duplicated at Reagan.

B. Reagan High Program

Evaluation Research Activities

Introduction level classes (lasting one week, meeting four times a week for three hours at a time), Beginner level classes (lasting four weeks, meeting four times a week for three hours at a time) and Intermediate level classes (lasting four weeks meeting four times a week for three hours at a time) were observed during Spring, 2001. The classes were chosen so as to try to follow a group of people who showed up at the first orientation session held at Reagan High School on January 27th. This attempt was largely successful; the researcher has followed 14 students who attended the Introductory class, and then followed the subset of nine people who continued through the month long

Beginner and the Intermediate level classes, three of whom had also taken the four day Introductory course at Reagan High School.

The researcher thus attended one class at three different levels, Intro, Beginner and Intermediate. While this allowed for continuity in research subjects (the researcher moved up with the students), it must be kept in mind that this restricts the generalizability of the observations, especially since the classes were taught primarily by the same teacher.

The Intro class was composed of 14 people and held between the dates of January 29 and February 1. The Beginner class was composed of 28 people and held between the dates of February 12 through March 8.² The Intermediate class was composed of 22 people and held between the dates of April 9 through May 3. Nine people were common to both Beginner and Intermediate, and three of those had also taken the four-day Intro course. A total of 24 people have given consent to the interviewer to be contacted for follow-up interviews at later dates. Program participants were interviewed in a structured format at two points in the program, once as they began their journey at the end of the introductory level as they were about the start the Beginner class and once as they were about to complete the Intermediate class. During this observational period, there were only two different instructors for these courses.

² Some of the individuals in the Beginner class had had an Introductory class at another time or place.

Interviews with CTTC staff

Six members of the CTTC staff were interviewed at various intervals in the program. The interviewees include the two site coordinators, one instructor and three interns.

Informal discussions with all program participants (N=45)

Informal discussions and day-to-day interactions were carried out with all the participants of the program including students, instructors and interns. The researcher attended the classes, following the curriculum, taking notes and participating in activities such as breaks and graduation parties along with the program participants. In fact it was sometimes a problem to try to maintain some distance from the students, some of whom figured out that the researcher was knowledgeable about computers and thus a source of information and help. This researcher did attempt to avoid helping the students too much in an effort not to influence the outcome of the students' trajectory under normal conditions of the program; however, sometimes offering help was unavoidable as it would be alienating at best and foster bad feelings at worst to refuse at least minimal help when asked directly.

C. Database analysis

The third component of our efforts uses the database that the CTTC program has accumulated in order to produce some statistics about the program. Working with the database proved difficult since its construction and its format underwent periodic changes, and this meant there were inconsistencies in data definitions and entries. However, we are able to use it to provide some basic outlines of the program.

As of May, 2001, the CTTC program has served 931 people. Almost half (431) the served population classify themselves as Hispanic, and almost two thirds (615) of those that were served during these last two years have been women, as illustrated in Table 2.

Table 2 Gender and Ethnicity of the CTTC Clients

Sex / Ethnicity	Hispanic/ Latino	White/ Caucasian	Black/ African- American	Asian Descent	Unknown / Other	TOTALS
Male	139	121	39	6	11	316
Female	283	216	91	14	11	615
TOTALS	422	337	130	20	22	931

Table 3 provides some detail on household income levels of the students taking classes. While not at the bottom of the income scale, most attendees come from households with modest incomes. Single person households average only a little over \$1200 per month, and two person households are roughly double that figure, suggesting most people are working in unskilled positions.

Table 3 Gender, Ethnicity And Income Of CTTC Clients

Average Annual Household Incomes*							Overall Average:	\$25,189	
Race/ Ethnicity	Sex	Averages	Family Size:						
			1	2	3	4	5	6	7
White/ Caucasian	Female	\$ 22,182	\$16,539	\$28,692	\$23,839	\$21,919	\$38,143	\$30,333	
Hispanic/ Latino	Female	\$ 24,527	\$12,814	\$24,918	\$24,984	\$28,487	\$29,925	\$29,835	\$13,925

Black/ African- American	Female	\$ 24,866	\$15,404	\$22,863	\$23,586	\$32,235	\$48,333	\$34,356	
Asian Descent	Female	\$ 26,643	\$16,500	\$32,000	\$10,000	\$29,000	\$25,500		
Other	Female	\$ 20,533	\$15,500	\$14,950	\$27,000		\$40,000		
White/ Caucasian	Male	\$ 25,494	\$16,273	\$30,202	\$36,750	\$41,229		\$62,000	\$48,000
Hispanic/ Latino	Male	\$ 24,237	\$17,602	\$27,242	\$27,448	\$25,563	\$22,688	\$20,000	
Black/ African- American	Male	\$ 28,680	\$14,462	\$40,196	\$36,250	\$35,200	\$31,733		
Asian Descent	Male	\$ 12,868	\$ 6,104	\$30,000	\$15,000	\$20,000			
Other	Male	\$ 18,788	\$ 6,000	\$23,767	\$35,000	\$16,000			

* Self reported incomes

As of May 2001, the CTTC program at both schools had offered 26 Beginner Classes with an average class size of 19.5. A total of 508 participants attended those classes, 358 of them female and 150 male. Of the 508, 374 participants completed the course. For both men and women the completion rate was 74 percent. Roughly 73 percent of all participants in the beginner class were female.

Table 4 Beginner Class Completion Rate

	Complete	Incomplete	Total
Female	264	94	358
Male	110	40	150
Total	374	134	508

The CTTC offered 18 Intermediate classes as of May 2001. The classes were attended by 328 people, 226 of them female and 102 male. Of these participants, 263 completed the course (for a completion rate of 80 percent). The completion rate for

females was 79.6 percent and for males, a remarkably similar, 81.4 percent. Close to 69 percent of all participants in the Intermediate program were female.

Table 5 Intermediate Class Completion

	Complete	Incomplete	Total
Female	180	46	226
Male	83	19	102
Grand Total	263	65	328

CTTC also offered Advanced classes to 104 students. These classes are less structured than the Beginner and Intermediate classes. They sometimes they take the form of independent study with volunteer / instructor and intern support. About 55 percent of participants in the Advanced classes were female and 45.2 percent were male. Given the fact that female students generally compromise two thirds of most classes, there is clearly a drop in attraction and retention rate of female students through the higher levels.

Examining the workforce status of the participants, we find that 36 percent were unemployed when they took courses. Three percent of the participants were retired and were seeking to reenter the workforce; about 57 percent of the participants already had employment, and three quarters of those participants were seeking advancements in their jobs.

Table 6 Workforce Characteristics of Participants

Workforce Data			
Upon Entry:		Number of Clients	Percent of clients
Employment Status	Seeking		
Employed	Advancement	406	<i>44</i>
Unemployed	employment	306	<i>33</i>
Employed	personal development	122	<i>13</i>
Retired	Personal development	32	<i>3</i>
Unemployed	personal development	25	<i>3</i>
Retired	employment	25	<i>3</i>
*unknown	*unknown	15	<i>2</i>
TOTALS		931	100

About 11 percent of the participants in the program had neither a High School diploma nor a GED. Nineteen percent of the participants had a college degree and another 34 percent had some college, highlighting the fact that a college degree was not necessarily a guarantee against the digital divide.

Table 7 Educational Background of Participants

Educational Level	# clients	<i>percent clients</i>
< HS or unknown	107	<i>11 percent</i>
HS or GED	262	<i>28 percent</i>
Post-HS Training	61	<i>7 percent</i>
Some College	321	<i>34 percent</i>
College Degree	180	<i>19 percent</i>
TOTAL	931	

A whopping 22 percent of the participants had a native language other than English. Along with literacy issues, the language barrier is one of the most important challenges facing the program. Currently there are Spanish classes only in Travis High School, and those are limited in scope and number due to lack of instructors.

IV. Findings

A. *Processing Applicants*

Participants in the program go through various screening and diagnostic procedures in order to be placed in the right class and to become oriented to the type of instruction that they will have. The program has developed a method of interacting with students that includes an orientation and that moves students through different logically staged classes.

Orientation

During the orientation session, prospective students fill out a detailed application form that includes questions about their socio-economic status and their knowledge of computer applications. During orientation students are also asked to sign an acceptable-use policy, which details what is permissible on the lab computers. After completing orientation, students are told that they may either try to show up at the first day of the class in their intended level (which requires an approval procedure if they would like to jump the initial levels and start at intermediate or advance levels) where they will be given a seat on a first-come, first-serve basis depending on the availability of seats and number of students who want to join the class or they may wait for CTTC to call them for a guaranteed seat in a class. Both Reagan and Travis High follow this procedure.

During orientation, the students are informed that CTTC is project oriented and free of charge. They are told that priority will be given to unemployed people or people in dire financial situation for guaranteeing seats in classes, but so far, most people who show up as stand-in students are in fact accepted into the class. Most of the people who come in for orientation have very little or no knowledge of computers. During the evaluation session attended by this researcher on January 27 in Reagan High School, only three people out of the more than 20 people in attendance felt comfortable using a keyboard or a mouse.

Students fill out a multi-page form with detailed questions about themselves and the level of their computer skills. Completing the questionnaire takes up to half an hour and most people require help at some point, asking their neighbors or staff members in attendance. The form is densely worded and formatted.

Some people who possess some computer knowledge and cannot decide between attending the Beginner classes or going directly to Intermediate level are encouraged to attend the Beginner class.

A major change to orientation is currently underway as the program moves to an on-line database (the CTK Community Technology Online Data Management System) system instead of applications. One intention with this database is that people will enter data about themselves directly into the database; the database will function as a quick diagnostic tool for identifying people's computer skill levels.

Assessment of Participants

Participants fill out a complicated, multi-page skills assessment form where they must mark "Never, Don't Know," "A Little Bit or Used To," "Often or Pretty Well," or

“Could Teach Someone,” in response to various questions. Each response has point values of 0, 1, 2 and 3. People are then asked to calculate a total score by adding their answers to the questions in that section. The sections are divided as Preparatory (Intro), Beginner and Intermediate levels. The questions for respective sections are shown in the tables below. At the Intro level there are six questions. Students who score seven or more are directed to the Beginner Class assessment; that is, anyone who answers “A little bit or Used to” to almost every question will be able to skip the Intro class.

Table 8 Intro Level Questions

Use any computer at all
Use a keyboard to type words
Type at least 10 words per minute
Use a “mouse” to move a pointer
“Push” buttons to do things on a screen
Play any kind of electronic or video game

Table 9 Beginner Level Assessment Questions

Type at least 20 Words-Per-Minute
Start up, log on, log off, or shut down a computer
Use a modern Windows or Macintosh computer
Resize & move objects on a computer “desktop” or screen
Run more than one computer program or “window” at a time
Use different types of computer mouse “clicks” and buttons
Use the special computer keys on a keyboard
Use computer keyboard or mouse “shortcuts”
Understand computer message boxes and know what to click
Open and close different computer files and programs
Use menus, “tools” and buttons in a computer program
Change “views”, toolbars, rulers, and other settings in a computer window or program
Use a simple picture-making computer program (Paint, Scribble, etc.)
Use a simple text-typing computer program (NotePad, WordPad, Write, etc.)
Create and edit computer files or documents (cut, copy, paste, select, etc.)
Use a Word-Processing program to format text (Bold, Italic, Center, Tab, Fonts, etc.) (WordPad, Microsoft Word, WordPerfect)
Save or open files from/to disks, drives, or directories
Use “Print Preview” & Printer Settings
Use dialogue boxes for settings and options
Use a Web Browser (Netscape, Internet Explorer, Mosaic, or AOL)
Search for something on the Internet using a search engine
Use e-mail to send and receive messages
Send and receive a file with email (as an attachment)
Know the names of major computer parts
Fill out a job application
Create your own resume
Know what to do in a job interview

Table 10 Intermediate Level Assessment Questions

TYPE AT LEAST 35 WORDS-PER-MINUTE
Use Microsoft Word to create various documents with different layouts and purposes
Use special layouts such as columns, tables, text boxes, graphics, headers and footers
Use MS Excel (or similar) to create simple spreadsheets for calculating accounts, ledgers
Use MS PowerPoint (or similar) to create a simple “slideshow” presentation
Use e-mail extensively and professionally
Manage multiple files, folders, storage types
Conduct in-depth Internet searches for specific topics or multiple keywords
Use the Internet for a variety of purposes (professional, personal, news, fun, chat, etc.)
Recognize a variety of applications, file formats, extensions, and viewing methods.
Create and edit several types of graphic files (WMF, GIF, JPG, BMP, etc)
Create a document or file which integrates various parts of the Microsoft Office Suite (mail merge, embedded links, etc.).

There are 27 questions at the Beginner Class assessment and students are expected to score at least 45 in order to be allowed to skip the Beginner level. That means that participants should be answering “often or pretty well” to almost all of the questions listed in Table 9. Of course, it is also possible that a person could answer “Could Teach Someone” to a subgroup of questions while marking “Never Don’t Know” to all the other questions and still be bumped to the next section. Since the response “Could Teach Someone” is worth three points, a person who could answer this to 15 of those questions would qualify to move ahead even if he or she did not know anything at all about subjects asked in 12 of the questions. Since the questions cover a variety of subjects, the

assessment process would not be able to differentiate between a person somewhat familiar with most of the subjects covered in the Beginner level class from a person who did not know anything about some of the subjects while having a good knowledge of others. For example, a person completely ignorant of word processing (four related questions) and completely ignorant of the Internet and email functions (four related questions) could easily score 45 if he or she were relatively familiar with using programs in Windows and able to fill out job applications, create resumes³ and know what to do in a job interview.

The Intermediate level assessment questions as listed in Table 10 are more general in nature compared to the Beginner level questions. They query whether the participant can, in general, use MS Word, MS Excel, MS PowerPoint, the Internet or deal with file management tasks in a Windows environment. There are 12 questions, and the minimum required score for participants willing to skip the Intermediate level is 20; in other words, the participant must be reasonably confident in most of the subjects.

After the Intermediate level the participants are offered a variety of courses depending on their interest and the availability of volunteers. The advanced topics include Programming (Java, Visual Basic and/or C++), Networking, HTML, and Linux. During the evaluation period, two advanced classes were offered in Reagan High School, HTML and Advanced HTML.

³ Most people, but not all, do use word processors to do resumes, but nonetheless it is not necessary to assume that link.

In addition, participants in the program can use the self-paced Tutorials that are installed in Travis High School. They were not yet available to participants in Reagan High School but will be in the near future.

In spite of the preponderance of participants who are Hispanic, there are very few classes in Spanish, and those are restricted to the first two levels – Intro and Basic. During the evaluation period, a participant with limited English capabilities would have only one option for a Spanish Beginner class (Travis High School between April 3rd and May 10th). The lack of Spanish classes reflects the dearth of bilingual instructors and volunteers, according to program directors.

There is no systematic assessment of literacy of the participants. Students are asked questions about their level of English and their level of education as shown in Table 11. The participants are asked to self-assess their levels of speaking, reading, writing and spelling; an answer of “Common/Average” to these questions would result in the necessary 8 points.

Table 11 Assessment Questions for Education and English

MINIMUM	English Language (choose one number for each):	None	A Little Bit / Weak	Common / Average	Excellent	
	Speaking	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	
	Reading	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	
	Spelling	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	
	Writing	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	
	<i>Add up</i> →	→	→	→	→	→

Education (choose one number for each):	Less than High School	GED / HS Equivalent Exam	High School Diploma	Extra / Technical Training	Some College	College Degree	
US	1	2	3	4	5	6	
Other Country	0	1	1	2	3	4	
<i>Add up</i> →	→	→	→	→	→	→	

TOTAL:

In order to be allowed to continue in the program above the Intro level, participants are expected to score at least 8 in the assessment and are advised to speak with the program directors if their scores are below six.

The participants are asked during orientation to fill out a short essay (about one fifth of a letter size page) about their goals, special circumstances, problems, interests,

reasons for wanting computer training, etc. The staff reads these essays in order to make qualitative judgments about literacy levels.

The application form is eight pages, plus two pages of “Acceptable Use Policy” and a page with the schedules. One page of the application form is reserved for CTTC staff use, the rest are either to be filled out or read by the prospective participant. There are many questions preceding the assessment component, which the prospective participant is expected to fill out and calculate. In a very real way, the application itself is a literacy test. The prospective participants often require help from the CTTC staff as they complete the application, and that help is readily available during orientation session.

Processing of Participants

Once a participant has completed his or her application form and turned it in, he or she then has to wait for a CTTC staff member to call, informing them of a guaranteed seat in the class that they were assessed for. This process of evaluating the participant and then re-contacting him or her is problematic, as will be noted below. During orientation, it is repeatedly stressed that there are always more seats available than the number of participants who show up and that those seats are awarded, on a first-come first-serve basis, to participants who show up in the first day of class.

After the applicants go home, the CTTC staff enter their applications into their database and, based on the quantitative assessment level and qualitative judgment, recommend the participant for one of the available levels of classes: Introductory, Beginner, Intermediate, Advanced or special topics. A few days before each class, the instructor for the class generates a report from the database. The report lists the persons

who are recommended for the particular class that is about to begin. The list is sorted according to attendance in the previous level of classes (if applicable), employment status (with unemployed persons getting preference), income level (priority for lower income) and family size (priority for larger families). The staff person then goes through the list, calling the people starting at the top of the list.

Many people are not found at the number that they have left, particularly since months might have passed since the time that they have signed up for the class. Some people have an alternative phone number listed, but some do not. Some participants have answering machines at their homes, but some do not. Although participants who have been through the beginner class acquire email addresses, most of the time they will not be emailed about their seat in the next class. In cases when there is no answer at a particular number, the staff will sometimes attempt to call back at a different time or call the alternative number, but there are no set procedures.

It is hard to assess the larger picture regarding the impact of the current method of processing since the “call-sheets” are not entered into the database. There is no way of knowing who has been called for which class. In order to attempt to get a sense of follow-up calls, the researcher acquired the list that the Intermediate instructor for INT 01-04 used to make the calls inviting participants to join the class that was about to begin on April 9th. The list was generated on April 5th and the calls were made on April 5th and April 8th. The instructor attempted to call 33 people. Using her marks and notations on the sheet, Table 12 was generated. The instructor states that it took her about 2 hours to make the calls. Thus, many of the calls were made one day before the scheduled class time, with no possibility of repeating a call to people who did not answer their phones at

that particular evening or for people to call CTTC with any type of clarifications or questions they might have had.

Table 12 Results of Attempted Contact with Participants

No Answer	9
Left Message on Answering Machine	13
Confirmed	3
Busy	2
Other	6

When the call-sheet is compared to the actual attendance sheets in the class, the researcher observed that only eight of the students, out of the total of 21, were attending the class because of the calls. Thirteen of the students had appeared as stand-by students. The class has a maximum size of thirty (if one limits it by the number of computers). Thus there was no problem accommodating the stand-by students. In fact, around nine more students could have been taken the class.⁴ This overall process, however, probably did not work to the advantage of most of the people who had attending the preliminary meeting since only eight of the original 33 who applied for classes actually appeared.

Interactions with the School

The Principal at Reagan High School, Dr. Scott, has expressed enthusiasm and support for the program. She has stated that she appreciates the fact that CTTC created

⁴ There are reasons besides the number of computers that might compel one to limit the class size.

and managed the labs and without their support, and that Reagan High School would be much behind in their technological infrastructure without CTTC (personal interview with Dr. Scott, 5/15/2001). She also attested that some of her custodial staff had started attending the program and that they were “beaming.” She had nothing but praise and appreciation for the program. However, she will be leaving Reagan High School this year. The principal turnover rate is very high both at Reagan High School and Travis High School, creating the problem of ensuring continuity since the school’s attitude can make a very importance difference in the well being of the CTTC program.

In Reagan High School, the teachers whose classrooms were used during the evenings for the program were ambivalent about the program. The improvements brought on by CTTC, such as the fact the CTTC had brought Internet access when there was none and had upgraded both the hardware and the software, were not unalloyed benefits for the teachers at Reagan High School. For example, the Internet had caused problems due to an unclear access policy in the school. As a result, during the spring 2001 months the school blocked student accounts from accessing the Internet. Upgraded software has caused a different set of problems since the books the schools use are not yet upgraded to the version of the software that they currently have. In addition, the teachers no longer have complete control over the network, and they have stated that they must ask the CTTC to install system-wide resources such as new programs or shared files on a network drive. Some of these problems have been addressed during this evaluation period with the CTTC program director and teachers meeting to discuss these issues, but as in the case of problems with Internet access, they reflect larger problems that often plague public schools. It should be pointed out that all three teachers at Reagan disagree with each other on network issues as well.

As of spring, 2001, the CTTC has a problem at Travis High School that may possibly endanger the functioning of the program. For example, currently there is no Network Administrator for the system in Travis, a situation that could potentially result in a disaster especially considering the fact that there is nobody implementing server back ups. There are disagreements between the school administration and the CTTC about the qualifications of the person that is responsible for the Network during the day and CTTC is often denied access to the Network hardware. Even though operations in Reagan are, for the most part, functioning smoothly, there is always the possibility of disruption, especially given the high turnover rates in administration of schools.

B. Findings at Travis

No classes were attended in Travis High School because of the time conflict with Reagan High School classes.

C. Findings at Reagan

CTTC offers different levels of classes. The classes that were attended in Reagan were the Introduction Class, the Beginner Class and the Intermediate Class. Each of the classes differed in style of teaching and the allocation of time. Observations in each class are discussed separately.

Intro Class

The Introduction is a 4-day (12 hours total) primer on how to use a keyboard and a mouse and how to turn a computer on and off. It is intended to take a person who may be completely unfamiliar with computers in general and the Windows operating system in particular and teach him or her how to interact with the computer at a minimum level.

Placement for the Intro level is done according to the answers a person has provided in the Assessment part of their application form. (For details of the Assessment procedures please refer to the section titled Assessment of Participants.)

Composition of the Intro Class

The intro class attended by this researcher was the very first Introductory class taught in Reagan High School. It was held on the week of January 29th through February 1st (the class was coded to as Intro 01-02)⁵. Leroy Smith taught the class, an instructor who also had been appointed as the site coordinator of Reagan High School. Fourteen people attended the introductory class. The class was overwhelmingly female, with ten female students. When asked about the gender imbalance, instructor Leroy Smith remarked that based on his observations and conversations, entry-level computer skills such as those taught by the CTTC were seen as “women’s work” by members of the community. It may also be that the gender imbalance was a reflection of the digital gender divide, i.e. there are more women without even the most basic computer skills in the Austin area workforce.

In fact, almost two thirds of the clients served by the CTTC are women. In this class, seven participants classified themselves as Hispanic, one as African American and six as White/ Caucasian. The reason why half the participants are Hispanic may be that the digital divide leaves more Hispanics behind, or it may be that these people reflect the residual demographic effect of the programs long connected with Travis High School, which is situated in a heavily Hispanic area. The average age of the participants ranged

⁵ Sometimes Intro classes are referred to as Prep classes.

from 23 to 63, but was skewed towards the high end, with a mean age of 52. Interviews with the participants in the Intro class revealed that some of the older participants were motivated to seek this class because they were either retired or on the verge of retirement and found that the social security income would not be sufficient, prompting a need for an updated skill set.

It may also be that the requirements of the program – attending classes four times a week for three hours at a time – makes it difficult for people with dependents or minor children to attend. In fact, 7 of the 14 participants in the Intro class lived by themselves, and 4 had only one other person living with them. The mean family size of the Intro class was 2. Of the three students with a family size greater than two, only one continued to the Beginner level – and her children were teenagers. In other words, having children may inhibit attendance at these evening classes because childcare is expensive or not available, or simply because being with one's children in the evening is a more important priority.

Content in the Intro Class

When asked why they were taking this class, participants emphasized feelings of having been left behind. Here is selection from statements participants made when asked about reasons for their participation, at the beginning week of the program (January 29 – Feb 1)

- “I need to get a job. Without computer skills I can only get part time jobs. It's time to get into the 21st century. I feel left out and I can't understand what people around me are saying.”
- “I am computer illiterate. I want to get back into the workforce.”

- “I feel lost. I don’t think I am an idiot, but when I am in front of a computer, that’s what I feel like. I feel like an idiot.”

Appropriately, the first two days of the class were more about overcoming the participants’ fear of computers. The very first exercise in class was to yell, in unison, “I can’t break anything.” They were told, to their visible relief, that anything they messed up would be brought back to its normal state by the student intern, Daniel. Daniel chimed in and assured the participants that he would fix whatever they messed up. Although it appears to be more of a technical question, the problem of error-recovery has important implications in terms of program design.

Throughout the four days of the Intro class, a significant amount of time was devoted to independent practice for students for typing and mouse practice. Students were expected to reach a 20 words per minute typing rate before being allowed to continue in the beginning section. In order to encourage mouse usage, the participants were taught how to play solitaire and minesweeper. They were also shown how to type using WordPad, which is a program that is normally a standard part of the Windows operating system. However, in this case, both the games and the notepads were not accessible to the students because the daytime teachers did not want their students to have access to them. In an amusing testimony to the problems of attempts at restricting students by technical solutions, the interns - who are often among the students that the teachers want to restrict access of these programs to - had to be called to change authorizations in the system to allow the game playing that CTTC uses to improve mouse and keyboard skills.

At the end of the program, the participants were asked to write a short letter using WordPad. The letter of one of the participants, who has been so far unable to continue any further in the program after having completed the Intro level, read as follows:

Dear Leroy, I have a sick grandson. I have a sick husband. I need to give them medicine so I must leave now. I will make it up on Saturday. Thank you for helping me.

All the participants in the Intro class successfully completed the Intro level.

Beginner Class

The researcher attended the Beginning Class that lasted for four weeks between the dates of February 12 and March 8th. The beginning class is an introduction to running programs in a Windows environment, creating and saving files in a networked environment, and hopefully finding them again, using simple functions on a Word Processor such as copy and paste and last, but certainly not least, acquire an email address from a free web-based email site and learn how to send and receive email. The participants are expected to have either been through the introductory program successfully (i.e. type 20 words per minute and be able to log on and off the system) or to have at least some limited exposure to a Windows environment. For persons who have not successfully completed the Intro program, placement for the Beginner Level is done according to the answers in the Assessment part of the student's application form. (For details of the Assessment procedures please refer to the section titled Assessment of Participants.)

Beginner Class Composition

The Beginner Class attended by the researcher (coded as BEG 01-02) lasted for four weeks between February 12th and March 8th. It was held four days a week, three hours a day. Stacy Bouwman taught the class in the first two weeks and Lainie Duro in the second two weeks.

There were 28 total participants in the class. In keeping with the general prevalence of female participation in the program, 21 of the students were female and seven were male. Of the participants, 11 classified themselves as “Hispanic/Latino,” 12 as “White/Caucasian” and five as “Black/ African-American.” Eight participants were currently unemployed and seeking a job.

Keeping with the pattern in the Intro class, more than two thirds of the class participants were either living with themselves or with only one other person (12 lived by themselves, 10 with only one other person) The average family size of the participants was 1.9. Only half the participants with a family size larger than two completed the project (three out of six). Out of those three, one of them attended only for 19 hours and one of them only for 24 hours.⁶ (The mean number of hours of attendance for graduating participants for BEG 01-02 was 41.6)

Twenty-one (out of a possible 28) people completed the Beginner 01-02. Of those people who did complete the Beginner 01-02, 16 of them continued to the Intermediate level. Nine out the 16 participants who continued on to the Intermediate level attended the class that was observed by the researcher, INT-04.

⁶ The third participant with a family size larger than 2 who managed to graduate did attend 48 hours. She is the same participant referred to in the Intro section as having teenage children.

Beginner Class Content

The Basic Class aims to provide enough Introduction to Word Processing and email so that the student is competent enough to create a resume and email it to a prospective employer as an attachment. In fact, that is the graduation requirement for the Beginning Class. (Details of the Graduation Requirements can be found at the Appendix document titled : CTTC Beginner Level Assessment / Final Project)

Table 13 summarizes the skills that the participant is expected to have acquired at the end of the four week period of classes.

Table 13 Skills to be Acquired at the Close of the Beginning Class

Run windows programs
Create and save simple files, and retrieve them from the network.
Create, edit and perform a few simple formatting techniques and a small document using WordPad or a similar type software
Send and receive email.

The class is organized thematically by weeks. The first week is spent revisiting some keyboard and Windows basics, such as mouse operations, resizing and moving windows, learning how to switch between windows, log-on and log-off procedures. In effect, the first week of beginner class recapitulates the content of Intro class with a few additions.

The second week is an introduction to basic word processing including simple character formatting. It is during this week that the participants start typing their resume. This week also serves as an introduction to file management since the resume has to be

saved on a portable medium, i.e. a floppy disk. Participants learn to save and retrieve files to and from different drives.

The third week is an introduction to creating and using an email account as well as the barebones of using web browsers. The participants used Yahoo to create a web based email account for themselves, which they will use to send their resume to a prospective employer and “bcc” the CTTC as proof of having fulfilled graduation requirements.

The fourth week is not used to introduce too much new material but rather to refine the participants’ file management skills and allow them time to finish their final projects. At the end of the class, a graduation party is held where each participant brings in some food to be shared with participants in other classes.

Between the second and third week, the instructor was changed from Mrs. Bouwman to Mrs. Duro, a change which some participants expressed as being unsettling; this was not necessarily because they preferred one teacher over the other but rather because they had gotten used to the teaching and speaking style of the first instructor and they now had to adjust. It also required the instructor to adjust to the class because she was not always aware of what exactly was covered. Changes in instructors are probably much more problematic at Beginner level classes since in a Windows environment there are many different possible ways of performing the same tasks, and until the student grasps the general principles of what is being done, most of learning is in the form of direct imitation of the teacher’s steps. A change in teacher almost inevitably results in minor differences in those steps.

The class often started with an hour of practice time for students. While this does allow for students who are late to not miss instruction, it has caused an abundance of downtime for participants who had mastered the material. During practice times, while many participants struggled to perform what they had just learned, there would be some who would play solitaire or minesweeper. Although they were useful as mousing practices in the Intro class and perhaps the first week of class, they were pure entertainment for most of the Beginner class. At any one “practice” time up to six or seven people could be observed playing games. A few would sometimes continue playing after the instructor resumed teaching. In the light of the fact that the course requires an extensive time commitment, four times a week, three hours a day, the use of this time may be problematic.

Intermediate Class

The researcher attended the Intermediate class that lasted for four weeks between the dates of April 9th and March 3rd. The intermediate class, titled “Microsoft Office Basics; Tips for Internet, Email & File Management” is an introduction to the Microsoft Office Programs MS Word, MS Excel and MS PowerPoint with special emphasis on MS Word. For persons who have not been through the earlier stages of the program, placement for the Intermediate Level is done according to the answers in the Assessment part of the student’s application form and their emailing a copy of their resume to CTTC. (For details of the Assessment procedures please refer to the section titled Assessment of Participants.)

Intermediate Class Composition

The Intermediate Class attended by the researcher was coded as INT 01-04 and it lasted for weeks between April 9th and May 3rd. It was held four days a week, three hours a day. The class was taught by Stacy Bouwman.

There were 22 initial participants in the class. Even though women outnumber men in the program by about two to one, the numbers in this class were almost equal – 12 women to ten men. Of the participants, nine classified themselves as “Hispanic/Latino,” nine as “White/Caucasian,” three as “Black/ African-American” and one as “Asian Descent”. Six participants were currently unemployed and seeking a job.

Keeping with the pattern in the Intro and Beginning class, more than two thirds of the class participants were either living with themselves or with only one other person (ten lived by themselves and six with only one other person). The average family size of the participants was two. However, unlike the Intro and Beginner classes there was no particular pattern linking family size and completion of the Intro class. Seventeen people completed the program out of a possible 22. Of the remaining five people, four are listed as “pending” which means that they have not emailed their final project yet. This does not necessarily mean that these participants are unable to complete the class; there are a variety of reasons that may cause problems in the emailing process, including misspelling of email addresses, which are easily correctable. The participants with “pending” status all have a high number of class attendance hours. The mean number of hours of attendance for participants who have already graduated or whose graduation is pending is 43.3.

Intermediate Class Content

The intermediate class is, like the beginner class, organized more or less around weeks. Week one is a recapitulation of file management followed by introduction to Ms Word functions beyond the basic copy/cut/paste level. Students learn formatting commands for characters and paragraphs. More sophisticated email functions such as attachments and basics of Internet searching are covered. By the end of the first week, the students receive a daily email from the instructor that summarizes in a sentence or two what to expect for that day.

The second week continues with Ms Word, covering more complicated functions such as columns and tables. The students are given an assignment where they produce an MS Word document using columns.

The third week is an introduction to Excel, including a brief introduction to formulas and functions. The students are shown how they could create a checkbook with a running balance. Although Excel is not covered in depth, many participants express that they will probably try to use Excel since it seems to be so useful.

The fourth week is intended to cover MS PowerPoint and the mail merge function in MS Word. Mail merge can use MS Excel files as a data source so it acts as a review of using MS Word and MS Excel. At the end of the week the participants are expected to have created either a document produced through mail merge or a PowerPoint presentation containing some graphics and animation and six slides. (The detailed description of the Final Project can be found in Appendix document titled APPENDIX C: CTTC Intermediate Class Final Project.)

The Intermediate class has students with a wide skill set because some of the participants have used computers for their work or at home while other people are in their fifth week of exposure to computers, having been only through the Intro and Beginner classes offered by CTTC. It has caused different parts of the program to seem too fast or too slow for different participants. To make matters more complicated, any given portion can be too fast for some and too slow for some at the same time, while the majority of the class can seem to be right on target. Even after as little time as five weeks of instruction, the researcher began to observe differences among participants who had never been exposed to computers before the CTTC training. For a variety of reasons, none of which could reasonably be expected to be controlled by the program, people do seem to “take to” computers with very different speeds. Thus, like the Beginner class, the Intermediate class suffered from the same problem of having some participants with too much downtime at the same time that it had participants who were struggling to finish their final project.

There were some important differences between the Beginning and Intermediate classes that meant the level of problems created by the skill set differences was reduced. For the most part the Intermediate class was “tighter” and more intensive compared to the Beginning class. Also, the fact that they were taught how to use Internet Browsers early on in the class has meant that the occasional participants who either already knew or had mastered the particular task could surf or do research on the Internet. In fact, one of the participants used the free time to learn about how to refinance the mortgage on his house and had almost finished the refinancing before the class was over! Many students had also started emailing their friends and family members and used their free time to write and read emails.

V. ISSUES AND RECOMMENDATIONS

The CTTC program at Reagan High School has established a training program similar to the one that has been operating at Travis High School. The smoothness and efficiency with which the basic program elements were transplanted into a new environment are notable. The Program has a system that works, and it is clear that numerous people receive the training that they desire. However, as it tries to improve and to expand, the program also faces many choices that involve trade-offs between conflicting goals. In programs such as these, there rarely are easy answers or solutions, and costs often cannot be avoided. In order to minimize the costs that come with these types of trade-offs, it helps to make the choices explicit. We discuss a few of the most notable issues that emerged from this research.

Skill Levels and Speed

The program faces perhaps its greatest challenge in accommodating adult learners with a dazzlingly large spectrum of previous experience with computers, technology, schools and classrooms. Even in a classroom full of beginners, most of whom had never touched a computer before, different learning curves could be observed in as little as two weeks. In interviews conducted with the graduating participants of INT 01-04 (N=17 out of a possible 21), six participants found the program a little too slow, four just right and seven a little too fast! The participants who found it too slow wished for “less downtime and more instruction” and the ones who found it a little too fast wished for “a slower pace, more repetition.”

The lack of self-paced Tutorials in Reagan High School is clearly exacerbating the problem because “downtime” cannot be used efficiently by the participants who are

absorbing the material at a faster pace. The installation of such programs will greatly help those participants.

Speeding up the instruction while holding the class composition the same would clearly disadvantage the people who need help the most in learning to deal with computers. Yet, it is inefficient to keep the limited classroom and lab space occupied by people who could be channeled faster through the program; tracking people into skills levels would open the space and resources for those people who need more attention. Some possible ways of rearranging schedules to allow for different learning paces are suggested below.

Rearranging the use of time

Currently, the classes are four weeks long. Participants often have no choice but to attend most of those classes even if they are learning the material quickly since it is not possible to predict what gets taught when. The downtimes during which participants are expected to practice are interspersed with periods of instruction. Often the practice time occurs in the first hour of the class – between 6:00 and 7:00 and sometimes as late as 7:30. Since most people come to classes from work, knowing that there will be no instruction in the first hour is not a helpful incentive for arriving on time. An alternative arrangement whereby the downtime is shifted to the end of the class so that participants who are comfortable with the material may leave earlier might work better, although it also would create the temptation for people to leave even if they had not yet mastered the material. One reason in favor of downtime in the beginning is the fact that some participants are sometimes late due to work demands. However, we observe that most people do get to the program around 6:15. Starting instruction around 6:15, with an

attempt to not cover the most important parts of the program in the first fifteen minutes of the class during which there might be some late arrivals, might alleviate this problem. Also, letting people who are comfortable with the material leave early would allow the instructor to spend more time with people who need personal attention the most.

Another possible rearrangement of time would be to break-up the classes into two-week segments. Since the completion of projects is the only requirement for graduation, people who feel comfortable finishing the project could do so and stop attending until the next cycle, and next subject, begins. People who need extra help could get more personalized attention, as the class size would diminish in the last few days. This is especially true in light of the fact that various parts of the program are familiar to some of the participants. For example, some know a little bit of MSWord, some have seen spreadsheets, and so forth. Breaking up the program into modules would help people achieve an attendance pattern more in tune with their needs.

Database

The CTTC database has many problems due to its evolving nature. It was started at a time during which there were not enough resources for designing and operating the complex database that their program would require. The introduction of the second site has considerably complicated matters. However, the CTTC is shifting to an on-line database management system that is expected to be operational in June of 2001. The new system will incorporate all the data from the old system and solve many of the problems in the existing database.

It must be noted that the CTTC has shown great foresight by making a considerable effort to collect data and keep it in an electronic format even though it did not have the resources to utilize the data in the best possible manner.

Interns

The use of interns who are students at the high school is a very successful part of the CTTC program at many levels. It has allowed CTTC to tap talent at prices it could not otherwise afford, as these students are very often highly qualified. It allows the CTTC to build a bridge to the school by providing an outlet for challenging the students from the computer-related classes in the schools.

Most of all, it seems to engage students that are otherwise “unengaged.” As reported in the findings, the interviews with the interns revealed that they are not necessarily the best students in terms of grades but are thrilled to be a part of this program. The fact that Reagan High School has been able to replicate the Travis High School experience of using such students suggests that this part of the program was not just a successful fluke specific to Travis High School.

The interns are very knowledgeable in the subject matter and able to help people very effectively. We observe that the interns are better at teaching people who are faster learners compared to people who are having difficulty with the subjects. It is plausible that they could impart a lot of knowledge quickly through one-to-one training with program participants. For example, some participants could be fast-tracked with, for example, twenty time slots for direct instruction with the Intern, preferably in conjunction with the self-paced tutorial system. This personalized instruction could be done by pairing students and giving them an appointed time with the intern. Although there are

clear limitations to this idea (the number of interns, how to select participants, etc.) some version of such a scheme could greatly accelerate the efficiency of the program by giving more time and attention to those that need it more while giving more concentrated information to those that are able to absorb it as such. Additionally, the interns would have the gratification of more direct contact with the students.

Technical Issues

The feeling of “I’ll break it” or “I’ll do something wrong” was found to be a common perception among the participants. Unfortunately, as anyone who has lived through computer virus infections, repeated instances of encounters with the infamous Windows “Blue Screen of Death,” program runtime errors, network crashes, etc. can testify, this fear is not completely unfounded. Computer systems are indeed volatile and definitely not error resistant. Files get misplaced, programs get renamed and lost, important program sub-sections get erased, caps lock and num lock keys inadvertently get pressed foiling attempts at login, etc. Thus, in order for the participants to be assured that their errors will be easily fixed, there must be in place a system that provides for relatively easy and rapid error recovery. The cloning of the terminals used at Travis High School is one such solution.

The teachers should, to the extent possible, avoid doing things on the Network that they have not tested beforehand. The researcher has experienced things such as PowerPoint presentations that could not be given because the presentation and the program on the Network were incompatible or projection systems that would not work when hooked up to a particular machine. Given the unreliability of computer systems, it

is obviously unavoidable that some software will sometimes not work. Thus, every effort should be made to not do anything untested during class.

Student Flow Through the System

Student flow through the system is the single-most problematic issue for the CTTC program. The CTK database, expected to go online in June 2001, will undoubtedly change some of the related dynamics. There are, however, process issues that the new database will not eliminate. Indeed, project personnel admitted that they have no clear policy on what we term “student flow” here, and that one is needed.

Under the current system, the student has to wait for a phone call from the CTTC after orientation. The phone call could come in a week, a month or six months. The staff could try to call only once or more. They may or may not try the alternative number. The lead-time between the class and the call might be a day or four days. This clearly causes many participants to fall through the cracks.

In the Intermediate class 01-04 calls mentioned above, some people were called on the day before the class started to be informed that they now had a seat in a class with an expected commitment of four weeks, four days a week, three hours a day. Clearly, a call on Sunday evening will not allow most people to commit to such a program starting the very next day. It clearly eliminates people with children or dependents as appears evident by the family size averages of the various classes. In fact, it eliminates anyone with any plans. Many people – in fact, most - who do come to orientations never take a class.

It is also true that the classes are filled by the “stand-by” students and that any other system of choosing candidates would inevitably cause attrition. This method,

however, potentially eliminates the most needy: families with dependents or families who do not have stable lives and thus move often, with changing phone numbers that mean that the CTTC is unable to contact them. In addition, since CTTC attempts to call only about 30-40 people per class (out of which at most a third seem to show up), the same people get called again and again and anyone who is not in the top 30 does not get called even though there would be seats for them in the class if they were called. (There is no method for eliminating the people whose phones are not answered from the database. Thus, they will get called the next time around since they will once again be on top of the list that is prioritized by income, employment status, etc.)

The CTTC recognizes the problem of the backlog with the people whose contact info is too outdated to be useful. Its directors are attempting to find a way to eliminate those people. That will not, however, eliminate the problem as long as the method by which the CTTC calls people is continued.

We recommend that a better system of prioritizing people be implemented. The desired system is indeed a prioritizing system, selecting a particular set of participants over others. The implementation of online database offers real possibilities that could be incorporated. For example, the new database allows for automatic prioritization – as soon as the data are entered, which is expected to be during orientation, the system will provide a “need ranking” and a “federal poverty level” ranking. It is technically possible to tell the most needy clients, right there and then, which class they may enroll in at what date. Since the classes are known months in advance and since all the potential applicants are in the database, there is no reason in principle to wait one day before the class to assign people to classes, especially to beginner level classes. The intermediate class could

be assigned at the end of the Beginner level class – again while the participant is there, in person. Clearly, this will not reduce attrition due to changes in life circumstances that are simply unpredictable very far into the future. However, the current system serves the highly motivated and the unencumbered above other participants. The CTTC directors have stated in various interviews that they are not necessarily trying to serve the most needy for whom there are more options. This may well be the correct approach for CTTC to adopt, directing more transient and unstable clients to different programs. That, however, is better done explicitly rather than adding one more failed attempt to the participant's memory.

APPENDIX A: CTTC Beginner Level Assessment / Final Project

Create your own simple resume:

- ❑ Use a Word-Processing program such as WordPad or MS Word.
- ❑ Include actual, current information.
- ❑ Put name and contact information at the top.
- ❑ Use formatting such as bold, italic, underline, center, tabs, etc.
- ❑ Use headers and sections such as “Objective”, “Experience”, “Skills”, “Education”, etc. Try to follow a professionally made example, but keep it simple.
- ❑ Show your draft to classmates & CTTC staff for feedback & proofreading.
- ❑ Print your resume – print & keep one as an original for yourself; also print & give a copy to CTTC Coordinators. Please do not print additional copies.
- ❑ Save a copy onto disk and/or your CTTC/THS network directory. Confirm with CTTC Program Coordinators that they are able to access the file.

Use E-mail to send your resume:

- ❑ Find the e-mail address of a potential employer or employment agency.
(use Internet or newspaper)
- ❑ Draft a message. Be sure not to send it until you have all parts below done.
- ❑ Include a “cover letter”-style explanation of why you are sending the resume.
- ❑ Copy and paste your resume as text *into* the message body of your e-mail.
- ❑ *Also* send your resume document (*resume.rtf* or *resume.doc*) as an *attachment*.
- ❑ If the employer or agency has requested a specific way to submit resumes (such as text-only in a message body, or via a web page, DO WHAT THEY SAY).
- ❑ Send a copy of all your employment-seeking e-mail messages to CTTC Coordinators by using BCC: CTTC@CATF-Austin.org (this is the *hidden* copy sending function).

APPENDIX B: BEGINNER CLASS GOAL OUTLINE

“Introduction to Personal Computers and Windows”

You Will Learn the Basics...

Using Common Computers

Using “Windows”

Using Files

Typing and Editing Words

Using the Internet

Using E-mail

...Plus Tips and Help On...

Job Searching

Making a Resume

Interviewing

Business Work Skills

Career Development

You will learn how to...

Name and understand the parts of a computer

Understand and explain how a computer "thinks"

You will learn how to...

Start up a computer

“Log on” to Windows

...or onto a network

You will learn how to...

"Type" on the computer

Edit and change your words

(text editing, word-processing)

Make your "papers" look nice

(formatting & page layout)

Use business-like communication tools

You will learn how to...

Use your files...

Open and Close

Save and Delete

Copy and Move

Find

Print

You will be able to...

Access the Internet (the World Wide Web)

Look for information (like you might in a library)

See how much information is out there ...free!

You will be able to...

Get E-mail

(an "electronic mailbox")

Send and receive messages

(anywhere in the world)

All free!

The "Final Assessment"

Make a basic Resume

(save it on a disk and also print it)

Organize a Portfolio

(all your best work & important documents)

Search for a great job on the Internet

E-mail your Resume

...and maybe you'll get that great job!

Keys to Success

Be Here

on time

every day

Be Friendly

work with others

trade phone #'s

move around

Be Patient

expect problems

it takes time

Get extra help

Q&A at beginning of class (15 min.)

Saturdays, breaks, etc.

APPENDIX C: CTTC Intermediate Class Final Project

You may choose one of the following for your final project. Once you are finished with your project email it to CTTC@CATF-Austin.org. Please do not send it to the Intermediate Instructor account.

Your subject line on your email should read: INT 01-04 Final Project.

Before you send the Final Project, do a “test” send to somebody in the class. When you feel comfortable that you are setting up the email correctly then send it to the CTTC account. Please only send it once!! Your instructor will not be able to check to see if your email and attachments have gone through. The best way to make sure it has gone through is to save a copy in your “Sent Items” folder and/or send a blind carbon copy to somebody else in the class!!

PowerPoint Project

Create a slide show about something you would like for others to learn. It can be about anything that is important to you. You might get to present your show to the class on the last day!!!

Requirements:

- ❖ Six Slides Minimum
- ❖ Two slides must contain animation

- ❖ Two slides must contain graphics. This can be ClipArt or even pictures you download from the Internet.
- ❖ Each slide needs to have automatic timings set for the animation. In other words you shouldn't have to press <Enter> or click the mouse to get text and pictures to show up on your slide.
- ❖ Animate the transition from slide to slide. However, you can set the transition to occur when you press <Enter> or when you click the mouse.

Mail Merge Project

Create a mail merge letter using MS Word and MS Excel. You will need to email all three of your files, The Main Document, the Data Source and the Form Letter, to the CTTC account. Use your imagination to fulfill the requirements.

Requirements:

- ❖ The address in your Main Document should contain only Merge Fields
- ❖ The greeting must contain at least one Merge Field
- ❖ The body of your letter should also contain a Merge Field
- ❖ The letter must also contain some special formatting
- ❖ The date in your Main Document should update automatically
- ❖ Your Data Source should have a minimum of ten records

APPENDIX D: QUESTIONNAIRES USED FOR INTERVIEWS

Technology Training Evaluation Project – Questions at the Intro Level

Telecommunications and Information Policy Institute, University of Texas at Austin

- 1) Your name _____

- 2) How many years of school have you completed? (for example, a High School diploma is 12 years, an Associate Degree is 14 years, a college degree is 16 years) _____

- 3) Did you ever use computers before taking classes at CTTC? Yes No

- 4) If yes, where did you use computers?
 work home school other (please specify): _____

- 5) Do you have access to computers outside of this location? No Yes
(please check all that apply):
 Home School Work Other (where?) _____

- 6) Did you use the Internet before taking classes at CTTC? Yes No

- 7) Besides email what have you been using the Internet for?
 - a) Shopping
 - b) News
 - c) Sports
 - d) Games
 - e) Entertainment

f) Other (please specify)

8) Do you use email for any purpose besides emailing the instructor and other students in class?

9) How did you hear about the training program here?

_____ At work

_____ The newspaper (which newspaper?) _____

_____ Saw it on television (do you remember the channel?) _____

_____ A friend or family member

_____ Other (please specify)

-

10) Do the hours of the program suit your needs? ___ Yes ___ No (Why?)

11) Does the location of the program suit your needs? ___ Yes ___ No (Why?)

12) Is childcare an issue for your attendance in this program? ___ Yes ___ No

13) Is transportation an issue for your attendance in this program? ___ Yes ___ No

14) What is your expectation from the program? (Please check all that apply)

_____ I am unemployed and I want to find a job

_____ I am employed but I want to find a better job

___ I am employed and I want to get a promotion

___ I want to learn about computers (why?)

___ I was told by my company that I had to learn about computers

___ I want to be able to keep up with my kids / help them with their homework

___ I don't know, I am just trying it out

___ I have other reasons. (Please Specify)

15) What do you like most about the program?

16) What do you like least about the program?

17) Do you think you will continue to the higher levels

___ Yes ___ No (why not?)

18) What do you like best about the instructor?

19) What do you like least about the instructor?

20) Was the program's pace too fast or too slow for you?

Too fast ___ A little too fast ___ Just right ___ A little slow ___ Too
slow ___

21) Were the attendants (the high school student – interns) helpful to you?

21) In what way could they be more helpful?

22) Did you like the layout of the classroom?

I liked it a lot ____ It was okay ____ I did not like it ____ (how else should it have been?)

23) Could you tell me what the requirement for graduating for this class is?

24) Could you tell me how things you learned in this program has changed the way you do things?

- a) I have found a better job ____
- b) I do my own job beter ____
- c) I feel better about myself ____ much __ a little __
- d) I feel better about technology ____ much __ a little __
- e) I feel comfortable using MS Word____ much __ a little __
- f) I feel comfortable using Ms Excel____ much __ a little __
- g) I feel comfortable using Ms Powerpoint____ much __ a little __

Technology Training Evaluation Project – Questions at the Intermediate Level

Telecommunications and Information Policy Institute, University of Texas at Austin

1) Your name _____

2) How many years of school have you completed? (for example, a High School diploma is 12 years, an Associate Degree is 14 years, a college degree is 16 years) _____

3) Did you ever use computers before taking classes at CTTC? Yes No

4) If yes, where did you use computers?

work home school other (please specify): _____

5) Do you have access to computers outside of this location? No Yes (please check all that apply):

Home School Work Other (where?) _____

6) Did you use the Internet before taking classes at CTTC? Yes No

7) Besides email what have you been using the Internet for?

g) Shopping

h) News

i) Sports

j) Games

k) Entertainment

1) Other (please specify)

8) Do you use email for any purpose besides emailing the instructor and other students in class?

9) How did you hear about the training program here?

_____ At work

_____ The newspaper (which newspaper?) _____

_____ Saw it on television (do you remember the channel?) _____

_____ A friend or family member

_____ Referral from Workforce Center

_____ Other (please specify)

10) Do the hours of the program suit your needs? ___ Yes ___ No (Why?)

11) Does the location of the program suit your needs? ___ Yes ___ No (Why?)

12) Are any of the following an issue for your attendance in the program?

a) Childcare

b) Transportation

c) Language

13) Do you use the drop-in hours?

Yes ___ (How often for how long?) _____

No ___ Do you know when they are? _____

(Why? Didn't feel the need ___ The times aren't right ___ Don't have time ___ Other _____

14) What is your expectation from the program? (Please check all that apply)

___ I am unemployed and I want to find a job

___ I am employed but I want to find a better job

___ I am employed and I want to get a promotion

___ I want to learn about computers (why?)

___ I was told by my company that I had to learn about computers

___ I want to be able to keep up with my kids / help them with their homework

___ I don't know, I am just trying it out

___ I have other reasons. (Please Specify)

15) What do you like most about the program?

16) What do you like least about the program?

17) Do you think you will continue to the higher levels

___ Yes ___ No (why not?)

18) What do you like best about the instructor?

19) What do you like least about the instructor?

20) Was the program's pace too fast or too slow for you?

Too fast ____ A little too fast ____ Just right ____ A little slow ____ Too slow ____

21) Were the attendants (the high school student – interns) helpful to you?

21) In what way could they be more helpful?

22) Did you like the layout of the classroom?

I liked it a lot ____ It was okay ____ I did not like it ____ (how else should it have been?)

23) Could you tell me what the requirement for graduating for this class is?

24) Could you tell me how things you learned in this program has changed the way you do things?

h) I have found a better job ____

i) I do my own job better ____

j) I feel better about myself ____ much ____ a little ____

k) I feel better about technology ____ much ____ a little ____

l) I feel comfortable using MS Word ____ much ____ a little ____

m) I feel comfortable using Ms Excel ____ much ____ a little ____

n) I feel comfortable using Ms Powerpoint ____ much ____ a little ____

o) I feel comfortable using web based email ____ much ____ a little ____

p) I feel ____

25) I wish we had learned more about

a) Word b) Excel c) Powerpoint d) Mail merge e) Internet f) _____

26) The thing I learned that will be most useful _____

27) The thing(s) that confused me most _____

28) What would you say to someone who is just starting the program?

29) In what way did the program differ from your expectations?

31) Is this the first time you tried to learn about computers?

a) I received training at work ___ when _____ where _____ what happened?

b) Attended training elsewhere ___ when _____ where _____ what happened?

c) A friend showed me some stuff ___ when _____ where _____ what happened?

d) A librarian helped me ___ when _____ where _____ what happened?

17) Do you have friends / family members that would like to attend the program? ___ Yes ___
No

18) How many people live in your household?

19) What are their ages?

20) What is their relation to you?

21) How many of them work?

22) Where do they work?

22) How many cars do you have?

23) Do you own or rent?

24) What would make this program better for you and your friends and family members?

Questions for Site Coordinator

- 1- How did this all start
- 2- How did you get involved
- 3- What's been the workload
- 4- What are the priorities of this program? Who determines them?
- 5- Why Travis? Why Reagan?
- 6- What do you view as the successes of the program?
- 7- What are the failures?
- 8- Besides money, what tops your wish-list?
- 9- What's your relationship with the school administrations?
- 10- How many interns? How much do they get paid?
- 11- How do you get the teachers? Where are the volunteers used? (I don't see them in Reagan)
- 12- The attrition rate?
- 13- The problem of variability of skills of participants
- 14- How can I learn more about the database