

# Computers and Technology

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## Objectives

As a result of this lesson, students will be able to:

- determine the degree of access the average Nicaraguan has access to computers and the Internet.
  - evaluate the extent of technology education in Nicaragua.
  - Evaluate the role of Internet cafés in Nicaraguan life.
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## Materials

- Student Handout: **Accessing the Information Age**
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## Activities

1. Begin the lesson by taking a survey of the class.
    - a. Ask students to raise their hand if they have a personal computer in their home. Take note of the number and write it on the chalkboard.
    - b. Ask students to raise their hand if they are taking or have taken a class in school on how to use a computer or on computer applications. Take note of the number and write it on the chalkboard.
    - c. Ask students to raise their hand if they have ever used a computer to access the Internet. Take note of the number and write it on the chalkboard.
    - d. Ask students to examine the results of the survey and to determine the degree of access they have to computer technology and the Internet. Is access readily available? Why or why not?
  2. On the chalkboard write the number 585.
    - a. Explain to the class that this number reflects the number of personal computers in the United States per 1,000 inhabitants, according to a published report by the World Bank in the year 2000.
    - b. Now write the number 9 on the chalkboard and explain to the class that this number represents the number of computers available in Nicaragua per 1,000 inhabitants.
    - c. Ask students to evaluate the difference between the two numbers. How much access does the average Nicaraguan have to computers and the Internet as compared to the average American? To the students in the classroom?
  3. Distribute the student handout entitled **Accessing the Information Age**.
    - a. Direct students to read the first section, entitled *The Average Family*.
    - b. Ask students to estimate the possibility that a family whose income was 800 cordobas per month would have enough to buy a personal computer for \$1,000 (14,000 cordobas).
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4. Direct students to read the next section, entitled *Computers in the Schools*.
    - a. Ask students to compare the opportunities that they have to learn computers to those of the students at Escuela Solidaridad.
    - b. Ask students to speculate on how their job opportunities in the future would be affected if they didn't have access to computer training.
  5. Direct students to read the next section, entitled *The Internet Cafés*.
    - a. Ask students to hypothesize why the cafés are mostly used by tourists and university students. Why wouldn't the average Nicaraguan utilize the cafés?
    - b. Ask students to explain the uniqueness of Puerto Café Benjamin Linder.
  6. Direct students to read the final section, entitled *Community Agencies*.
    - a. Ask students if they have any similar programs in their communities (YM/WCA, public libraries, etc.) How do such programs benefit the community?
    - b. Ask students to assess the difficulties that such a community-based program might face, particularly in such an impoverished area as Subtiava. (Lack of funding for repairs, etc.)
  7. Take another survey of the class by asking students to raise their hand if they have a television in their home. Take note of the number and write it on the chalkboard.
    - a. Ask students to raise their hand if they have a Nintendo or other video games in their home. Take note of the number and write it on the chalkboard.
    - b. Ask students to raise their hand if they have ever gone to a video arcade. Take note of the number and write it on the chalkboard.
    - c. Ask students to determine the degree of access they have to of this type of entertainment. Is it readily available? Why or why not?
  8. Ask students to place themselves in the situation of an average Nicaraguan family that earns 800 cordobas per month. What type of access would they have then?
    - a. Explain that in Nicaragua (in the cities) you will find Nintendo cafés. Like the Internet cafés, children pay a small fee to play Nintendo for an hour.
    - b. The Nintendos are used items and are usually sent to Nicaragua by family members living in the United States. The people running the games can make enough to buy more machines and games from the profits.

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c. Also explain that televisions are more common in Nicaragua, but many families do not own one. They are only able to see broadcasts in stores or in public places like bars and restaurants.

9. Concluding Activity:

Direct students to write a reflective essay in answer to the following question: "How has technology affected my life? If I lived in Nicaragua, how would my life be different?"

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# Accessing the Information Age

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## The Average Family

Approximately 50 percent of the population live in poverty and 19 percent live in extreme poverty. Almost half of the population lacks access to safe water, illiteracy is still high (34%), and there is a whole generation that was unable to attend school or saw its education interrupted by the war.

The Gross National Income per capita is used by the World Bank to measure the average income of a country's citizens. It is the dollar value of a country's final output of goods and services in a year divided by its population. The GNI per capita of the United States is \$34,800; Nicaragua's is \$480.

To provide a further example, the starting salary of a Nicaraguan schoolteacher is 800 cordobas per month. It takes about 14 cordobas to equal one U.S. dollar. Therefore, a beginning schoolteacher earns just over \$57 a month.

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## Computers in the Schools

The Digital Opportunity Initiative published a report in July 2001 saying that countries are at a "critical juncture," a time when access to information technology can improve living conditions in developing nations or leave the country further behind. The report found that regions developing technology-supportive infrastructures, policies and educated work forces will be better equipped to reap the benefits of economic development than those that don't.



In Nicaragua, however, most public schools are not wired for computers or access to the Internet. In the Escuela Solidaridad in Managua, for example, students can take a voluntary typing class as a prelude to possibly having access to a computer keyboard in the future.

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## The Internet Cafés



Internet cafés are very common in the cities of Nicaragua. In Granada, for example, there are four within a four-block radius of the central plaza. These independent business rent computer time for those who want to use a computer. The cost is relatively inexpensive by U. S. standards, and the service is reliable. For example, it would cost you 30 cordobas per hour to use a computer at the Internet K@fé in Granada. (Approximately \$2.15 in U.S. currency.) You may pay by the hour, half hour, or quarter hour.

The Internet K@fé opened in 2000 and was the first Internet café in Granada. It has nine networked computer terminals. The business gets from 70 – 90 people per day, but 75% of its customers are tourists. Others are students from the universities. The computers are mostly used for e-mail and chat.

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**Puerto Café  
Benjamin  
Linder**

Internet cafés throughout Nicaragua repeat this pattern of usage. Some, however, have a slightly different approach. The Puerto Café Benjamin Linder in Leon has 14 computer terminals, a printer, and a scanner. Like the Internet K@fe in Granada, it charges 30 cordobas per hour and has approximately 75 users per day, mostly tourists and university students using them for e-mail and chat. However, part of the money received from the patrons of the café and its restaurant is used to pay for prosthetic limbs for the people of the region. This is part of the Polus Center Project, based in Boston, that developed the program to provide prosthetics for those injured by the war. Free prosthetics paid for from these funds are provided by the Walking Unidos Clinic in Leon.

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### **Community Agencies**

Many community agencies are trying to fill the gap created by lack of funding and infrastructure development. One such organization is the Centro de Capacitación Indígena in the Subtiava section of Leon. This ethnic community center for the descendants of the region's original inhabitants has developed a training program for local students in the use of computer applications (Microsoft Office). The center has developed a collaborative with a university in Managua to certify the graduates of the program once they complete the eight-month course. The person behind this initiative is Benito Téllez Maradiaga.



**Ligna Maria  
Torrez studying  
PowerPoint**

There is a great demand for this service because there is nowhere else in the community where students can come and receive such training. There are a total of twenty students who come in two and a half hour shifts, one in the morning and one in the afternoon. They must also spend four hours on Saturday. Students like 14 year-old Ligna Maria Torrez come in the morning then attend a standard school program in the afternoon.

The program has problems, however. All of the machines are older, donated computers, and it is becoming increasingly difficult to maintain them. Many of them are no longer serviceable, and only five are still in working order. In addition, with computer technology advancing, students will switch machines during class so that each can use the faster computers.

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