

Chapter III

Information Dispensary Systems

Information delivery tools like interactive movable type, reference substructures, the telereader terminal, and *Easy* (a new computer language, see Chapter IV) could enable nations with high illiteracy to bring themselves to full literacy within a decade or two. With the new tools, the less developed countries (LDCs) could, with some assistance from the advanced nations, institute national systems of *information dispensaries* that could provide almost all of their peoples with both (1) the opportunity of learning how to read and (2) continuing access to vast collections of digital books, magazines, newspapers, and reference tools, as well as great numbers of entertainment products.

The enormous costs of educational systems like those in the United States, Europe, Russia, and Japan are far beyond the economic capabilities of the LDCs. The LDCs simply do not have the abundance of resources that would be needed to construct and equip the educational plants, train the teachers and administrators, develop the curricula and instructional materials, and then pay the high costs of operating and maintaining such labor-intensive systems. In fact, if one thinks in such terms, the prospects are dreary indeed for LDCs like Haiti, Guatemala, Somalia, Egypt, Mozambique, Cambodia, Bangladesh, and Afghanistan. But, the development of national information dispensary systems that can be accessed by all their residents could enable advancing nations like Mexico, China, and India to achieve full literacy within 10 years – and all nations to be there in less than 20 years.

The Information Dispensary Concept

Information dispensaries will, in most cases, be small, simple buildings. They will be prefabricated – or they may be constructed or assembled by workers living near the dispensaries. Each will contain 10 to 100 carrels (small booths), depending upon the population of the area to be served by the dispensary. Each carrel will contain a telereader chaise, an electrical outlet (from either the local power system or, if none, from the dispensary's batteries or power generating system), and a telereader served by the dispensary's two central information processors and data stores. The data stores will include programmed self-instructional materials that adults of average intelligence can use to learn how to read; a wide range

of informational materials that will satisfy the immediate needs, interests, and questions of those who will be using the dispensary; and a variety of entertainment and recreational materials for the users. (The dispensary may become the learning center of the community faster if it is also the entertainment center.) Each information dispensary will have storage cabinets for spare telereader components and other hardware, discs, software, and other materials.

The information dispensary will be a high-tech, but low-cost, stand-alone computer center. Each dispensary will be a well-insulated structure constructed with nonflammable materials. On the dispensary's roof there will be solar panels, a windmill, a passive cooling tower, a water tank, and a satellite dish. (Most of the data used and stored in the dispensary will come from satellites.) Interior lighting will be provided by full-spectrum fluorescent lamps. Part or all of the dispensary's electrical power and heating needs will be provided by hydrogen-fueled generators and heaters adjacent to the dispensary.

To illustrate how an information dispensary might be introduced, financed, and employed in a small village with high illiteracy, the following vignette may be helpful.

The Saga of Kababah

An information dispensary is considered for installation in Kababah, a remote Afghan village of 250. An advance party of three, including a member of the International Reading Corps, is sent to Kababah from Kabul to determine whether or not the residents are receptive to the placement of a dispensary in their village. The degree of receptivity is high because the village leaders have long wished to establish a school there – and some residents have visited another village where a dispensary is in operation. So the villagers, in consultation with the advance party, select a conveniently accessible location for the building, a dispensary that will serve up to 18 people at a time.

The land is leveled and stakes and lines for the foundation are put in place. The road to the village cannot accommodate trucks, so the Afghan government representative in the party calls Kabul and requests the forms, bags of cement, and other materials needed for the foundation. The next morning a helicopter brings in the materials and the foundation is laid. When the concrete is set, the forms are removed and Kabul is notified. The helicopter returns again toting the information dispensary shell which is lowered onto the foundation. The helicopter picks up the foundation forms and returns them to Kabul. The helicopter later returns with equipment and supplies for the dispensary.

Meanwhile, the advance party is determining what, if any, assistance might be needed by the villagers to fully utilize the dispensary. Because none of the villagers are highly literate, it is decided to request the assignment of a Reading Corps member to the village for a few months. The installation crew also surveys the village inhabitants. They interview several and help select the dispensary manager and assistant manager. The manager is a full-time employee paid, in this case, by the Afghan government. (In some communities, particularly the larger towns and cities, the local governments, school systems, and/or libraries pay part or all of the salaries of the managers. In other nations, other approaches are used.) The assistant manager is a part-time employee.

Hamid Khan, one of the village leaders, is selected as the manager. He is the village blacksmith and seems to be intelligent, mature, and responsible. Additionally, he can read and write about as well as anyone in the village. (The most literate individuals available are usually considered as dispensary managers. But, if there are no literate individuals in the village, those with the kinds of traits and attitudes found in Hamid Khan are selected.) A volunteer staff is also selected and training is started. There are enough volunteers and enough interest is shown in the dispensary to plan to keep it open 24 hours a day, six days per week. The Kababah Village Council decides that the dispensary will be closed each week from sunset on Thursday until sunset on Friday.

The training of the staff consists primarily of how to operate the telereaders and how to perform simple repairs. The staff is shown how to identify common types of problems – problems that can be resolved by operating the appropriate controls, by making manual adjustments, or by replacing equipment components. Storage and retrieval methods are also explained, as well as scheduling and ways of keeping the dispensary users satisfied. Everything covered in the training is also explained in the training discs (interactive multimedia presentations) that are included in the dispensary's library – so the training can be repeated by anyone at any time.

The dispensary staff, and the other villagers in turn, are taught how to "play" with the telereaders. Such an approach is used because in Kababah, as in many communities with information dispensaries, many of the users come initially not to learn how to read, but to be entertained by the movies and games offered at the dispensary. And some of the users never come to the dispensary for anything more.

But most, particularly the young adults, soon discover that it is easy to learn how to read with the programmed instructional materials available on discs in the dispensary. They also find that the information they get from the mudocs enables them to do many things for themselves and their families that they previously could not do. This becomes apparent to others as well and prompts others to use the dispensary as a source of

useful and practical information. As the parents learn the advantages of reading and the usefulness of a large library of information, they start taking their children with them to the dispensary. Children are permitted in the dispensary, but the general rule established by the Kababah Village Council is to give scheduling preference on the basis of age. The oldest members of the community get first choice. However, weekly time limitations in each individual's usage give an opportunity to all who want to use the dispensary.

Kababah's information dispensary came equipped with a large digital library on optical discs, but its library is continually expanded through the inflow of satellite transmissions. Many of the documents received at the dispensary are informational and educational publications provided by the Afghan government or other organizations at no charge. Others are publications purchased by individuals in the village or by the village council – or provided by the International Reading Corps or other outside organizations. Also, each month the dispensary receives a physical shipment that includes replacement parts for malfunctioning components, optical discs, and other hardware products provided for, or purchased by, dispensary users.

After the dispensary has been in operation in Kababah for 12 months, most of the adolescents and young adults in the village are literate. And some are regularly consuming large quantities of information. Within a few years, the majority of homes in Kababah have their own telereaders. And eventually, the majority of those in the village are members of the MetaBook Club Afghanistan. The people in the village are far more vital, productive, and self-sufficient than they had ever been before. Malnutrition has been eliminated and the health of the people is greatly improved. Crop production and incomes are much higher. Several men and women from the village are attending universities or specialized training institutions. A general feeling of happiness and satisfaction prevails over the population. And the Kababans live happily ever after..

THE END

The Saga of Kababah is, of course, a fairy tale. But it may be a fairy tale that can, in some useful measure, be brought to reality. During the next decade we may see many countries instituting national information dispensary systems to give their people access to telereaders and extensive libraries. Installing the kind of information dispensary described in the story (that is, the building and foundation, the telereaders, servers, disk systems and library, storage cabinets, spare components, etc.) will probably cost \$400-800 per person or, in the case of Kababah, \$100-200 thousand. Installing information dispensaries throughout Afghanistan would cost \$10-20 billion – and several billion additional dollars to install an information distribution

satellite system to serve all the dispensaries. Operating and resupply costs would also run several billion dollars per year. Substantial sums for Afghanistan, to be sure, but within their means if carried out as a five or ten year program, particularly with loans, grants, and other financial and technical assistance from the advanced nations.

Will the advanced nations assist the LDCs in implementing national information dispensary systems – or comparable programs? Some will provide much assistance. Others will provide little. Those that provide aid will find they are developing new markets and new allies. Eventually, most nations will see that it is in their own best interest to help others. The affluent and advanced nations will come to realize that it is to their advantage to promote healthy economies and populations in all nations. It will become apparent that a planet with a preponderance of poor nations and sick economies will eventually become an uninhabitable planet – uninhabitable by the "haves" as well as the "have nots."

Telereaders and the other tools of the mudoc technology may help bring about a highly beneficial kind of international competition. The advanced nations may descend upon the LDCs to help them become full-fledged participants and contributors to the world economy through the installation of national information dispensary systems. Each advanced nation is expected to target, as recipients of their largesse, those that are the best potential markets for their products (particularly communications age products) – and the best prospective trading partners. The competition will arise when more than one advanced nation has targeted a particular LDC. There will also be a competition between nations in their efforts to bring their own populations to higher levels of literacy and knowledgeability. Such competitions should prove to be constructive and beneficial for everyone.

[Note to the reader: When *The Mu Primer* is published as a print-on-paper book and as an electronic book, this chapter will also describe how information dispensaries in the LDCs will evolve into "MuCenters," the advanced nations' commercial counterpart to the information dispensary. MuCenters are neighborhood information convenience markets (described in detail in *The Mudoc Technology*, The Mudoc Corporation's business plan), a new kind of neighborhood store that will become as ubiquitous around the world as the convenience markets and video stores that now dot the U. S. landscape. In addition to giving people in the neighborhood access to

telereaders, MuCenters will sell, rent, and deliver movies, electronic books, telereaders, large displays and other presentation devices, computers, software, and a wide variety of other communications age products and services. As information dispensaries evolve into MuCenters in the LDCs, the LDCs will evolve from agrarian societies into information-based societies without going through the kind of environmentally destructive industrialization that has been seen in some of the advanced nations.]

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