

EDUCATION

World 50% Illiterate

► NEARLY HALF the people in the world cannot read a simple story in the newspaper.

Today there are more than a billion illiterates—the equivalent of the total population of Europe, Africa, North America and South America—in countries throughout the world.

In some areas, the illiteracy rate reaches to 90% and, the United Nations Educational, Scientific and Cultural Organization reports, the situation is getting worse.

Eleven million persons in the United States cannot write a simple letter, read an ad in the paper for a job, or follow the cooking instructions on packaged foods. This is what it means to be functionally illiterate, to have completed no more than five years of schooling.

Half of all American Indian adults on reservation areas are functionally illiterate. The specific rates may vary from reservation to reservation, depending on the amount of time they have had schools.

The Navaho Indians of the southwest United States still do not have enough classrooms for all of their children.

The Pine Ridge reservation in South Dakota, potential target for the proposed National Service Corps, has schools to take care of the younger generation, but there are no specific literacy courses in the adult education program for the older generation.

The depressing prediction for Latin America is that only 5% to 10% of the child population will learn to read well enough to read a newspaper. Even then, there is only one newspaper for every seven literate persons in circulation.

In American cities, on Indian reservations and in Latin America, high illiteracy rates are coupled with poverty and unemployment. The development of literate populations may be inseparable from a rise in the standard of living for these people.

• Science News Letter, 83:150 March 9, 1963

EDUCATION

More Peace Corps Science Teachers Needed in 1963

► ADDITIONAL Peace Corps volunteers have been requested to teach science in 1963. In Latin America, for example, science teachers will be needed in the next school year for Ecuador, Costa Rica, British Honduras, El Salvador, Peru and Venezuela. They will be needed in Turkey, the Philippines, Ethiopia, Ghana, Nigeria and Sierra Leone.

Peace Corps volunteers are teaching science today in elementary, secondary, college and university classrooms around the globe. A few hundred Americans are making it possible for several thousand people to study general science, biology, chemistry, physics, botany and zoology.

Intensive training for overseas assignments at U.S. universities will begin in June, July and August of 1963. Some 50 campuses to date have been training centers for Peace Corps volunteers. The period of training is usually about eight to ten weeks.

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GENERAL SCIENCE

Reports Live Only Decade

► THE AVERAGE useful life of a physicist's scientific papers is only 10 or 12 years, and some reports published in the learned journals are never cited by later authors.

This has been brought out by efforts to develop a semi-automatic system of retrieving technical information.

Supported by the National Science Foundation, Dr. Myer M. Kessler of the Massachusetts Institute of Technology Libraries is striving to develop such a system to save scientists' time. He foresees one which would enable a scientist to say to a machine, "here is an article that interests me, search the literature and find others like it," and get a satisfactory list of articles back from the machine.

One of his problems has been to determine how much of the great and growing volume of technical literature is likely to be relevant to a working scientist's needs, he reports in *The Technology Review*, 65:33, 1963.

"To seek an approximate, although not ideal, answer to this question we have examined more than 175,000 references in papers published by physicists, largely in *The Physical Review*.' We have assumed that this reference literature is a close approximation to the working literature of physicists, and have drawn some interesting conclusions from it.

"Although close to 1,000 journal titles served as reference sources in this study, some 50 titles accounted for 90% of all the references; several hundred titles were found but once in the entire literature examined. Such a pattern was found regardless of the particular journal being examined; and appeared to be independent of language, geography, or political sphere of influence.

"American physics journals, our research

indicates, are the chief source of information not only for other Americans, but for the international community of physicists."

Deciding how much of the literature must be searched to meet a given scientist's needs is only part of the problem that Dr. Kessler and his colleagues face.

A semi-automatic information retrieval system, he emphasizes, must meet many rigid requirements, but sufficient progress has been made to make him hopeful that one can be developed.

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GENERAL SCIENCE

Growing Flood of Paper Deters Science Research

► A GROWING FLOOD of paper and reports that hamper the scientific research with government support is protested by an editorial in *Science*, 139:725, 1963.

The editor, Dr. P. H. Abelson, who is also head of the Carnegie Institution of Washington's Geophysical Laboratory in Washington, D. C., protests that inefficiency will result from National Institutes of Health regulations that require special justification of budgetary changes involving more than \$1,000 in grants.

"To handle this paper work more bureaucrats must be recruited," the editorial stated. "Previously the NIH program was staffed with knowledgeable scientists.

"The new posts can be filled with administrative types who will not be able to handle scientific problems with confidence. They can only run scared, go by the book, and introduce all kinds of excuses for delay."

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GENERAL SCIENCE

STS Winners Judge 25 Years of Science Events

► THE 40 outstanding young scientists in the nation, gathered at Washington, D. C., for the Science Talent Institute Feb. 27 through March 4, suggested the outstanding scientific advances of the last 25 years which they believe should be buried in a new time capsule at the 1964-65 New York World's Fair.

Almost unanimously, the 31 boys and nine girls mentioned the harnessing of atomic energy, an event that made headlines before most of the high school seniors were born.

In the biological sciences, the advances most often mentioned were the evolution of antibiotics, the linking of heredity to DNA and polio vaccine development.

Development of the electron microscope, man's venture into space, electronic computers and transistors also impressed the young scientists as significant events of the past quarter century.

Boy or girl, biological scientist or physical scientist, the 40 were in very close agreement as to the important developments in their own specialized field as well as in the full realm of scientific discovery.

The outstanding young high school seniors were selected from a total of 3,274 contestants in the annual Science Talent Search. They come from 35 schools in 19 states and the District of Columbia.

During their stay in Washington, they toured research laboratories, visited eminent scientists, met members of Congress, and were judged for \$34,250 in Westinghouse Science Scholarships and Awards.

The Science Talent Search is conducted by Science Clubs of America, a SCIENCE SERVICE activity, and is financed by Westinghouse Educational Foundation.

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