

Introduction

Human resources are Japan's greatest resource and a source of national pride.

The world economy has been rapidly globalizing, with China and other Asian countries on the ascent. The population of Japan has been rapidly decreasing, with declining birth rates and demographic aging. These have been factors undermining the growth potential of Japan's economy. To maintain competitiveness and enhance our stature internationally under such circumstances, it is vital to maximize the potential of human resources, which are the greatest resource of Japan.

Science, technology and innovation are not possible without the (human) element. Human resources play important roles in the creation, systematization and transfer of knowledge and values. The knowledge and values gained are further developed and utilized toward improving society. Human resources are the key.

In promoting science, technology and innovation, the optimum abilities and potential of human resources have to be utilized. New endeavors are necessary for the creation of knowledge and value ahead of other countries around the world. The fruits of science, technology and innovation will further inspire the people of Japan and encourage them to take on new challenges. In this virtuous cycle of new endeavors by every Japanese person with an entrepreneurial spirit, Japan will strive to do the following: commit to accelerating economic growth, contribute to international society, and solve various problems and ease constraints in foreign affairs. Our country is strongly called on to pursue these endeavors.

Many major countries of the world have been working to bolster their human resources.

For future science, technology and innovation, the USA has been implementing measures to promote the development of human resources by formulating strategies regarding education in the fields of science, technology, engineering and mathematics (STEM). To further bolster its international competitiveness, the U.S. government has been strongly promoting active participation by women in the STEM fields.

European countries have been promoting the flow of researchers across boundaries of both research fields and nations, providing researchers with a unified market where knowledge and technologies are freely disseminated to form a virtuous cycle. Countries are trying to use that borderless, flexible flow of researchers as the driving force for science, technology and innovation.

China and India, which have abundant human resources, actively dispatch students and researchers to foreign countries in an effort to foster world-class researchers. Both countries promote science, technology and innovation in their countries by forming cycles in the flow of such human resources.

Singapore promotes its science, technology and innovation by recruiting top level human resources from other countries.

It has become an age of international competition to develop and secure talented human resources.

In light of this, this year's white paper focuses on human resources, which play a prominent role in science, technology and innovation. It is based on the current state of overseas and domestic economies and human resources. This white paper presents a basic direction for human resource development, analyzes and identifies present efforts by the Japanese government, clarifies and analyzes issues that should be addressed, and clarifies the directions for measures and efforts toward realizing the identified goals.