

ABSTRACT

Research on Cooperation and Development of Education, Science and Technology between Korea and Developing Countries in Africa

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1. Research Objectives

This research was carried out as a cooperative research project by the Korean Educational Development Institute(KEDI) with the support of the National Research Council for Economics, Humanities and Social Sciences(NRCS). It is the second year of research as part of a three year research program conducted from 2010 to 2012 under the title, 'Research on Cooperation and Development of

Education, Science and Technology between Korea and Developing Countries in Africa.'

In the initial year of research, 2010, we had divided the Africa into five target regions which consist of Northern, Western, Eastern, Central and Southern African Region. Based on the regional sorting, one partner country from each region was selected. The second year of research in 2011 sought and provided mid-long term cooperative strategies with the Association for the Development of Education in Africa(ADEA) as well as four sub-Saharan African countries. The third year of research, 2012, will suggest the module for education, science and technology cooperation with developing countries in Africa.

Based on the issues collected from the first year of research and needs analysis of Africa countries, the study is aimed to provide regional and mid-long term cooperative strategies for ADEA and each country including Nigeria, Ethiopia, Democratic Republic of Congo, and Tanzania. Also, it is intended to suggest a policy for our government to effectively pursue.

2. Research Methods

The research information was collected through literature review, field study, focus group interview, expert meetings, and policy debates. For the literature review, information and documents collected from international organizations (e.g. WB, AfDB, ADEA), governments (e.g. Nigeria, Ethiopia, Democratic Republic of Congo, Tanzania), African regional communities (e.g. EAS), research institutes under the NRCS, and universities were analyzed. Along with the methods, meetings and interviews with the internal and external countries' experts, field study and focus group interview were also conducted to collect

data. For data analysis, SWOT analysis model and 'Country Specific Support Strategy Model' were used.

3. Core Cooperation Projects

A. Country Specific Core Cooperation Projects

1) Nigeria

- A) Improve a training system for elementary and secondary school teachers in Nigeria
- B) Send advisory board to reform free and compulsory education system
- C) Standardize elementary and secondary school curriculum and consult teaching methods
- D) Build the higher education center for excellence
- E) Improve educational administration management information system

2) Ethiopia

- A) Expand the accessibility of early childhood education and improve the quality of primary and secondary education
- B) Capacity building for higher education development
- C) Effectiveness of technical and vocational education to combat poverty
- D) Contribution of adult and non-formal education to anti-poverty and to economic development
- E) Improvement and innovation in educational administration and finance system

3) Democratic Republic of Congo

- A) Achieve universal compulsory education taking completion rate into account
- B) Build the capacity of basic education through the improvement of elementary and secondary school teachers' competencies
- C) Reconstruct basic education in the Eastern disputed area to increase the capacity for country development
- D) Strengthen science and technology education and research competence through a policy promoting higher education
- E) Support the capacity of technical and vocational training in conjunctions with the poverty reduction strategies
- F) Provide adult literacy education for younger adults' rehabilitation after dispute
- G) Improve the educational finance and budgetary support system in conjunction with international organizations

4) Tanzania

- A) Enhance and vitalize the enrollment rate of early childhood education
- B) Increase elementary teachers' teaching competence
- C) Develop national policy research techniques as well as expertise in higher education R&D system
- D) increase the contribution of technical and vocational education to poverty alleviation
- E) Connect adult and informal education and poverty alleviation projects

B. Regional Core Cooperation Projects

1) Education Cooperation Project with ADEA

- A) Support the establishment of Pan-African University(PAU) and higher education capacity building projects
- B) Assist the regional Center of Excellence(COE) research project and the establishment of educational policy research organization
- C) Aid the establishment and management of virtual University System
- D) Promote the project, Teacher Training Initiative for Sub-Saharan Africa(TTISSA)
- E) Support a promotion program of teachers' competences
- F) Pursue regional education management information system (EMIS) and assist promotion program of e-learning capabilities

2) Regional Education Cooperation Projects

- A) Participate in school education–health linkage basic education support project
- B) Improve education management information system to support educational finance
- C) Develop and run a packaged program which links school, community and economic activities
- D) Support the development and operation of various institutions' higher education teacher training programs
- E) Involve in basic education support projects to stabilize the central region after disputes

- F) Aid the development of vocational and technical education in connection with national economic development strategy
 - G) Assist the settlement of vocational and technical education, along with anti-poverty programs
 - H) Foster science and technology policy through the higher education reform support at the global level
- 3) Science and Technology Cooperation Projects

A) First Step : Cooperation Projects for Building Science and Technology Foundation

- (1) Build basic infrastructure such as social overhead capital (SOC)
- (2) Establish a base to invigorate private investment for health and immune system maintenance
- (3) Train science and technology secondary school teachers
- (4) Link science and technology policy to education policy

B) Second Step : Cooperation Projects for Expanding Science and Technology Innovation

- (1) Establish science and technology infrastructure of a country in introduction stage
- (2) Set up a mid-long term cooperation strategy for increasing human resource in the field of science and technology
- (3) Expand technology transfer as well as technical assistance related to main areas
- (4) Strengthen intersectoral collaboration network among technologists (African Ministerial Council on Science and Technology, etc.)

- (5) Provide the support for joint research in focus areas

4. Policy Recommendation

A. Basic Directions

First, Education, science and technology cooperation should be in accord with direction, principle and norm of international cooperation development.

In order to do so, education cooperation should be carried out based on 'Education For All' (EFA) suggested by UNESCO in 1990 and 'Millennium Development Goals' (MDGs) by UN in 2000 as major indicators for educational development. According to the Paris Declaration by OECD / Development Assistance Committee (DAC) in 2005, donor countries' development aid should be aligned with the national development strategies of developing countries and a project needs to be carried based on harmonization between donor countries and partner countries.

At Accra meeting in 2008, the support for aid projects and expansion of aid to maximize the aid effectiveness was presented, along with the steady implementation of the Paris Declaration.

Furthermore, the participation of civil society to increase the effectiveness of ODA was stressed in 2011 Busan Declaration. It is necessary for public agencies which are responsible for development cooperation (Korea International Cooperation Agency, KOICA, the Economic Development Cooperation Fund, EDCF) to pursue continuous and effective cooperation project with international, regional and cross-joint promotion organizations.

Second, education, science and technology cooperation should respond to demand of African countries' education, science and technology. Recently, aid effectiveness of ODA has been highlighted. OECD / DAC announced "Rome Declaration on aid harmonization" in February 2003 and "Paris Declaration on aid effectiveness" in March 2005 to emphasize the cooperation between donor and partner countries, and the importance of partner countries' lead. On top of that, the involvement of civil society in partner countries was also suggested in 2011 Busan Declaration. Therefore, this research also aims to increase the aid effectiveness and to carry out demand-oriented cooperation with Africa countries.

Third, Korea's experience on education, science and technology cooperation should be shared at the global level. Since World War II, Korea has experienced economic growth with the support of developed countries. Our national development was achieved not only through extrinsic factors such as foreign official development assistance but also intrinsic factors. Even with the lack of natural resources, our country achieved economic growth in a short period of time through the development of education and training of human resources. Korea has similar aspects of Africa's political and economic situation: we experienced colonial rule and civil war, causing the delay of economic development, and also had an authoritarian military. In that sense, promotion of education policies for national development, universalization of primary, secondary and higher education, human resource through technical and vocational training, achievement of ICT in education, and efficient operating system through securing educational finance must be introduced. Vocational education, the universalization of higher education and ICT in education has achieved sequentially.

Policy Issues

1) Build the Foundation for Education, Science and Technology Cooperation

In order to build the foundation for educational cooperation, first in the field of education, it is necessary to a) establish an integrated educational cooperation promoting system, b) develop demand-based mid-long term national support strategies, c) build country specific and regional cooperation system, d) devise country and region cooperation strategy. In the field of science and technology, a) the establishment of linked cooperation system with the local African Ministerial Council on Science and Technology, b) construction of regional cooperation foundation through Regional Center of Excellence, c) sector cooperation system to specialize the focus area should be made.

2) The Sharing of Experience on the Development of Education, Science and Technology

For the sharing of experience, first in the field of education, a) development of content in terms of Korea's educational development policy and administrative governance, b) operation of customized professional development training program for partner countries, c) training and dispatching of professional manpower in the field of development cooperation d) differentiated policy consulting is required. In the field of science and technology, a) carrying out a differentiated regional cooperation project, B) building Technology Licensing Office system, c) supporting the establishment of organizations (KIST, KAIST, etc.) should be made.

3) Improve the management of education, science and technology cooperation project

There are four requirements to improve the management of education, science

and technology cooperation projects as the following: a)securing stable development cooperation funding, b)providing intensive support on a program, c)strengthening the development cooperation with the private sector, civil society, d)intensifying South-South cooperation and triangle cooperation. In science and technology sector, a)linkage of science and technology policy and education policy, b) preparation of development cooperation strategies matched to science and technology level (step by step strategy), c) construction of poverty – health – education linkage system, are required.

The list of mid-long term education, science and technology cooperation policy with Africa can be summarized as follows.

Goals	Cooperation and Development of Education, Science and Technology between Korea and Developing Countries in Africa		
Basic Direction	<p>First, education, science and technology cooperation should be in accord with education development cooperation's directions, principles and goal in international community.</p> <p>Second, education, science and technology cooperation needs to respond to demand for science and technology of African countries.</p> <p>Third, education, science and technology cooperation should be the sharing of our country's experience and knowledge on development</p>		
Sector	Build Infrastructure for development cooperation project	Sharing of experience and knowledge on development	Improvement of management for development cooperation
Education cooperation	A) Establishment of an integrated education cooperation promotion system	A) Creation of content on Korea's education development policy and governance	A) Securing stable development cooperation funding
	B) Demand-based strategies provide mid-long term national support strategy	B) partners customized professional development training program operations	B) providing intensive support on a program

Goals	Cooperation and Development of Education, Science and Technology between Korea and Developing Countries in Africa		
Science and Technology cooperation	C) Build country specific and regional cooperation system	C) training and dispatching of professional manpower in the field of development cooperation	C) strengthening the development cooperation with the private sector, civil society
	D) Devise country and regional cooperation strategy	D) Differentiated policy consulting	D) Intensifying South-South cooperation and triangle cooperation
	A) The establishment of linked cooperation system with the local AMCOST	A) Carrying out differentiated regional cooperation projects from other donor countries	A) Linkage of science and technology policy and education policy
	B) Construction of regional cooperation foundation through Regional COEs	B) Build Technology Licensing Office building	B) Preparation of development cooperation strategies matched to science and technology level (step by step strategy)
	C) Build sectoral cooperation system to specialize the focused area	C) Support the formation of organizations (KIST, KAIST, etc.)	C) Construction of poverty - health - education linkage system

Key Word: Africa education, education development in Africa, educational cooperation with Africa, education development cooperation with Africa, education ODA for Africa, science and technology of Africa, development of science and technology in Africa, cooperation with Africa in science and technology, science and technology ODA for Africa