Collaboration with educational research institutions in other countries


As a result of the Japan-China-Republic of Korea (ROK) trilateral summit meeting—during which leaders from the three nations agreed to enhance both person-to-person and cultural exchanges—the heads of the national institutes of educational research from Japan, China, and ROK gather on a regular basis to deepen their understanding of the significance of promoting international exchanges and cooperation and to discuss measures for encouraging such exchanges and cooperation among the three research institutes.

The 5th Meeting was held in Korea in November 2015. With regard to the implications of the “Education Agenda and Global Cooperation in the Post 2015 Era” based on the outcomes of the World Education Forum held in May 2015, the representatives described how they had moved ahead with their own action plans. After that, they discussed the theme of future cooperation plans among the three institutes. In the near future, two directions: (i) the holding of academic joint meetings and seminars, and (ii) the broadening of cooperation involving wide-ranging educational research bodies in south-east Asia and regional authorities such as UNESCO Bangkok and SEAMEO, were agreed on by all in this summit meeting.

The next meeting is scheduled to be held in Beijing, China in November 2016.

<table>
<thead>
<tr>
<th>Date</th>
<th>Counterpart</th>
<th>Subject matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 25, 2011</td>
<td>The National Institute of Education Sciences of China</td>
<td>Trilateral exchanges and cooperation in the field of education among the three institutes</td>
</tr>
<tr>
<td></td>
<td>Korean Educational Development Institute</td>
<td></td>
</tr>
<tr>
<td>November 1, 2006</td>
<td>Korean Educational Development Institute</td>
<td>Research exchanges and cooperation</td>
</tr>
<tr>
<td>November 1, 1985</td>
<td>China National Institute for Educational Research</td>
<td>Exchanges of documents and information on education</td>
</tr>
<tr>
<td></td>
<td>(currently known as the National Institute of Education Sciences)</td>
<td></td>
</tr>
</tbody>
</table>

From left to right (as of Nov. 2015):
Tatsuya Otsuki, Director General, National Institute for Educational Policy Research of Japan
Sun-Geun Baek, President, Korean Educational Development Institute
Yan Wang, Head of Delegation, Department for International Exchange, National Institute of Education Sciences of China
As the only institute for educational policy research in Japan

The National Institute for Educational Policy Research (NIER) started out as the National Institute for Educational Research in 1949 as “an institute that conducts practical and basic research in education.” Half a century later in 2001, when we revised our mission and responsibilities as part of the reform of the government structure, to be an “administration regarding basic research and studies on policies related to education,” the name of the institute was changed to the present National Institute for Educational Policy Research.

Based on the principle that the central and municipal governments should collaborate as equal partners in educational administration, the role of the central government is to provide support by guiding and advising the local bodies based on its expertise. Therefore, the establishment of national centers for the curriculum, and for student guidance and counseling was seen as an essential step and this eventually led to the establishment of the Curriculum Research Center and the Guidance and Counseling Research Center, and moreover, in order to improve the system for practical survey research in the field of social education, NIER established the Practical Social Education Research Center as well as the Educational Facilities Research Center, which carry out basic and specialized research that contributes to the planning and formulation of policies relating to the educational facilities. In January 2008, the institute relocated to the current building, which also accommodates the Ministry of Education, Culture, Sports, Science and Technology (MEXT). This enables us to work closely with MEXT, both physically and substantively, on educational policy research; and we are now jointly conducting research that covers the entire education system, from elementary and secondary education to higher education, social education, and lifelong learning.

In this environment, we not only implement, as per usual, research projects on policy issues, the “National Assessment of Academic Ability”, and international joint research such as the OECD-PISA, TALIS and IEA-TIMSS, but we have also expanded to cover specialized and empirical survey research on the curriculum, student guidance, social education, and educational facilities. Furthermore, this year through the establishment of the Early Childhood Education Research Center serving as the hub of a nationwide research network in the field, we have been able to conduct effective research activities on early childhood education and care.

Nowadays, we live in a rapidly changing society with the progression of an ageing population and a declining birthrate, globalization, and advancements in science and technology. In order to be able to enrich people’s lives and to nurture future generations creating energy throughout society as a whole, “independent-minded learning by individuals to realize independence, collaboration, and creativity” is truly needed for all people, as stated in the Second Basic Plan for the Promotion of Education. In order to achieve this goal, the central and local governments are required to work together to pursue policies that aim to realize a lifelong learning society where all people continue with their lifelong learning and are able to utilize their learning outcomes in society.

In the summer of 2015, the Central Council for Education established the principle of “a curriculum open to the society” in the discussion of a Course of Study for future generations, in accordance with the recommendations made by the Council for the Implementation of Education Rebuilding. Since then, the Council has recommended three guidelines; (i) the Cooperation of Communities and Schools, (ii) “Team-Gakkou” (School as a Team – a proposed system that allows administrators and specialists to support teachers so that teachers can concentrate on classes), and (iii) Improving the Quality and Ability of Teachers. It also advocated in May 2016 for the new institutionalization of higher education institutions which conduct practical vocational education and is currently conducting deliberations on the Third Basic Plan for the Promotion of Education.

In order to steadily achieve the educational reforms mentioned above, it is becoming increasingly more important to conduct advanced survey research and verify the educational policies by analyzing corroborative evidence and domestic and international good practices. NIER, as the only institute for educational policy research in Japan and also as a theoretical pillar of educational reform, intends to promote studies which are beneficial for schools and useful in policymaking with the cooperation of MEXT, the boards of education across the country, universities and research bodies, and also to proactively make these results accessible to the public.

July, 2016

Tsuyoshi SUGINO
Director General
The National Institute for Educational Policy Research conducts a variety of surveys and research on overall educational administration as the comprehensive national institute for playing an important role of educational policies.

History

The National Institute for Educational Policy Research started as the National Institute for Educational Research, which was established in June 1949 based on the provisions in the Act for Establishment of the Ministry of Education—promulgated in the same year—together with the National Museums, Institute of Statistical Mathematics, and National Institute of Genetics.

In line with the reorganization of ministries and agencies in the central government, in January 2001 the research organization was reviewed and reorganized to strengthen its role and character further as a research institute contributing to the planning, formulation, and promotion of policies on education. As part of this major restructuring and reorganization, both the Curriculum Research Center and the Guidance and Counseling Research Center were newly established to enhance specialized research, while consultation and support functions were integrated with the public administration. Additionally, its name was changed to the National Institute for Educational Policy Research, reflecting its role as a comprehensive policy research institute.

April 2016 Establishment of the Early Childhood Education Research Center
June 2009 60th anniversary commemoration
January 2008 NIER relocation to the current building of MEXT in Kasumigaseki
April 2004 Establishment of the Educational Facilities Research Center
April 2001 Establishment of the Practical Social Education Research Center in Ueno
Reorganization of the Educational Resources Research Center
January 2001 Rename to the National Institute for Educational Policy Research,
Establishment of the Curriculum Research Center and the Guidance and Counseling Research Center
June 1999 50th anniversary commemoration
May 1989 Restructuring and reorganization of the Institute
May 1987 Establishment of the Educational Information Center
May 1972 Establishment of the Science Education and Research Center
June 1949 Establishment of the National Institute for Educational Research
Organization chart

Council

Director General

Deputy Director-General

Dept. of Research Planning and Development
- Office for Educational Resources Research Promotion
- Library of Education
- Information Planning and Supporting Div.

Dept. for Educational Policy and Evaluation Research

Dept. for Lifelong Learning Policy Research

Dept. for Elementary and Secondary Education Research

Dept. for Higher Education Research

Dept. for International Research and Co-operation
- Office for International Collaborative Research

Curriculum Research Center

Dept. for Curriculum Research
- Curriculum Research Div.

Dept. for Curriculum Development
- Curriculum Development Div.
- Academic Ability Div.

Curriculum Director

Guidance and Counseling Research Center

Planning Div.

Early Childhood Education Research Center

Practical Social Education Research Center

Planning Div.

Educational Facilities Research Center

Dept. of General Affairs
- General Affairs Div.
- Accounting Div.
- Planning Office

About National Institute for Educational Policy Research

Budget (Unit: JPY billion)

Total budget for FY2016: 3.23 yen

- 1.41 yen (44%)
- 0.27 yen (8%)
- 1.55 yen (48%)

Research and project costs
Labor costs
Management and operating costs

Staff

Staff (as of April 2016)
142 staff members
(excluding persons holding concurrent positions)
The Department of Research Planning and Development is responsible for the overall planning and coordination of NIER's research and project activities. It performs management activities for research projects, such as agenda-setting, progress administration, and monitoring research outcomes to ensure they are implemented efficiently and effectively in response to educational policy issues and social demands. The department also works to disseminate the results of NIER's research by organizing public symposiums on educational research and international symposiums on educational reform, as well as by publishing the NIER Research Bulletin and NIER News.

[Office for Educational Resources Research Promotion] The Office for Educational Resources Research Promotion presents NIER’s findings and comprehensive information pertaining to educational practices and survey research via its database and website. In addition, the Library of education which houses approximately 5385,000 books including educational literature and materials, was established for the purpose of supporting research activities within and outside NIER. The Office also maintains, operates, and manages an information system that is the basis for the entirety of research activities at NIER.

Taking into account historical developments and the outlook for educational policy, the Department for Educational Policy and Evaluation Research carries out empirical and comparative international research on issues that form the basis for planning, implementing, and evaluating Japan's national educational policies. The Department's recent work includes basic studies and research concerning the system, current state and/or future vision of educational administration and finance, and exploring the ideal ways to establish school systems able to respond to rapid social changes.

The Department of Lifelong Learning Policy Research carries out fundamental research relating to awareness and learning needs, the levels and content of knowledge and skills of adults, as well as evaluation of diverse learning activities. In addition, the department conducts surveys and analyses contributing to the promotion of coordination and cooperation which help provide a synergy effect in the lifelong learning environment of schools and the local communities. Furthermore, the division also undertakes analytical work for the Programme for the International Assessment of Adult Competencies (PIAAC), which is one of the international surveys of the OECD.

The Department for Elementary and Secondary Education Research aims to conduct research on basic issues relating to elementary and secondary education policies in Japan. Recent research topics include future frameworks for upper secondary school education, integrated elementary and lower secondary school education, small-group education, improvements to teacher quality, and fundamental research on the organization of curriculum.
The Department for Higher Education Research carries out studies and research that contribute to planning of higher education, and improvement of university education. The department also holds workshops that cover formulation of exchange networks between universities, research institutions, and administrative bodies.

The Department for International Research and Co-operation conducts various studies related to MEXT's policy issues and collects and analyzes basic information regarding the educational policies and reform trends of other countries. The department is committed to disseminating, in English, basic information about the Japanese education system and its policies to researchers abroad. Furthermore, the department is responsible for implementing joint research projects, such as the OECD's Programme for International Student Achievement (PISA), and hosting the Meeting among the Heads of Japanese, Chinese, and Korean National Institutes of Educational Research, in collaboration with other departments and centers of NIER.

The Educational Resources Research Center presents NIER's research findings, as well as various other information regarding educational practices and educational research, to the public via its website and database. Additionally, the department set up an Education Library containing approximately 535,000 books, including textbooks and other educational literature, to support research activities within and outside NIER. The Center also maintains, operates, and manages an information system that is the basis for the entirety of research activities at NIER.

The Curriculum Research Center is responsible for (1) surveys and research on basic matters concerning national policies for elementary and secondary school curricula; (2) liaison with research institutions, universities, and other related organizations in Japan; and (3) consultation and support for educational institutions and other parties in Japan that handle elementary and secondary school curricula. For example, the center conducts the National Assessment of Academic Ability in collaboration with MEXT, the Courses of Study Implementation Survey (formerly known as the Curriculum Implementation Survey), the Surveys on Specific Issues, the Trends in International Mathematics and Science Study (TIMSS) assessment, the Study on Curriculum to Foster Competencies, and the Study on Education for Sustainable Development (ESD) at School. Additionally, the Center also works on research and development for Evaluation Standards and Methods, the Designated Experimental School Project, and the production of Teaching Materials and Case Study Collections. Furthermore, the center provides support in the areas of curriculum design and teaching methods for the boards of education, schools, educators, and others engaged in education.
### Guidance and Counseling Research Center

The Guidance and Counseling Research Center carries out studies and research that contribute to the planning and formulation of guidance and counseling policies, and provides expert support and consultation for schools, boards of education, and other entities. The goals of such activities are to enhance student guidance, which improves social skills and the ability to act while respecting each student’s personality and endeavoring to increase their individuality, and academic and career guidance, which cultivates a student’s capacity to consider their own way of life and their ability to autonomously choose their own future career paths.

### Early Childhood Education Research Center

With the increased public interest in educational policy, the Early Childhood Education Research Center was established in April 2016 for the purpose of conducting effective survey research on early childhood education and care. As a center of excellence in Japan, the division has three primary responsibilities: (i) the promotion of survey research on early childhood education; (ii) the creation of research networks between domestic and international institutes, the local governments and kindergartens; and (iii) the dissemination of research outcomes to the local governments and educators.

### Practical Social Education Research Center

To help revitalize the social education projects carried out by municipalities, the Practical Social Education Research Center conducts nationwide surveys on the actual situation of social education activities, develops learning programs that promote local residents’ contribution to society, and studies improvements to instructor training and the quality of instruction in the communities. Moreover, the center is committed to providing information relating to social education by developing educational materials that are useful for training social education instructors in the communities, which, by producing and distributing social education programs over the internet, will introduce case studies of distinctive practices across the country.

### Educational Facilities Research Center

The Educational Facilities Research Center carries out basic and specialized research concerning the planning and formulation of policies that cover the diverse range of issues confronting educational facilities, such as responses to changes in the social circumstances that surround educational facilities and recommendations for enhancing and improving curricula. Specifically, the center is responsible for researching methods that will make educational facilities more earthquake-resistant, eco-friendly, and secure, in addition to collecting, organizing, and disseminating information on educational facilities.

The center is also a Member of the OECD’s program on effective learning environments, and is actively involved in the international exchange of information and knowledge through the seminars that it holds with overseas educational institutions.
Research Projects(FY2016)

Research Projects are the research activities, conducted by project teams composed of researcher both inside and outside NIER, through which NIER sets its research agenda for administrative policy issues.

## List of Research Projects (FY2016)

<table>
<thead>
<tr>
<th>Field</th>
<th>Research Topic</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Administration and Finance</td>
<td>Study on educational effect</td>
<td>FY2015-2017</td>
</tr>
<tr>
<td></td>
<td>Study on variety and specialization of local educational administration: Regional revitalization and educational administration</td>
<td>FY2016-2018</td>
</tr>
<tr>
<td>Elementary and Secondary Education</td>
<td>Study on curriculum to develop competencies</td>
<td>FY2014-2016</td>
</tr>
<tr>
<td></td>
<td>Study on development of non-cognitive (socio-emotional) competence and scientific assessment method</td>
<td>FY2015-2016</td>
</tr>
<tr>
<td></td>
<td>Study on secondary analysis on results of the National Assessment of Academic Ability</td>
<td>FY2015-2016</td>
</tr>
<tr>
<td></td>
<td>Study on English education at elementary school</td>
<td>FY2015-2016</td>
</tr>
<tr>
<td></td>
<td>Study on growing and learning during the transitional period from pre-primary to primary education and the quality of education and care in early childhood</td>
<td>FY2015-2016</td>
</tr>
<tr>
<td>Educational Staff</td>
<td>Comprehensive study on training, personnel allocation and continuous education of teacher to develop the qualifications and abilities of pupils</td>
<td>FY2015-2016</td>
</tr>
<tr>
<td></td>
<td>Empirical study on allocation of teachers and class size</td>
<td>FY2016-2018</td>
</tr>
<tr>
<td></td>
<td>Study on fostering of “teaching skills for ICT (Information and Communications Technology) use” during the period of teacher training course at universities</td>
<td>FY2016-2017</td>
</tr>
<tr>
<td>Higher Education</td>
<td>A Study of Teaching and Learning Environments that Support Students’ Growth</td>
<td>FY2016-2017</td>
</tr>
</tbody>
</table>
Study on educational effect

Research Project Leader: Director, Department of Research Planning and Development

■ Research outline

With collecting and classifying previous empirical studies on educational effects inside and outside Japan, we conduct a new study through the analysis of existing domestic data such as government surveys; "National Assessment of Academic Ability", "Curriculum Implementation Survey", and "Longitudinal Survey of Middle-aged and Elderly Persons". Then this project aims to provide fundamental data contributing to policymaking. Furthermore, we attempt a longitudinal survey which measures educational effects from preschool years and verify the feasibility in Japan. As for available empirical studies in the past, those research results are gradually disclosed on our website.

In FY2016, we intend to proceed a new empirical study on educational effects and a longitudinal survey concerning preschool education is commenced in seven municipalities from April.

An example of longitudinal surveys in America

An outline of Perry preschool program

- Implementation period: 1962-1987
- Target: Lower-income African Americans aged 3-4, Educationally "high risk" 123 children
- Contents: School education, Home visit, Parent education
- Education period: 2 years
- Follow-up: Ages 3-11, 14, 15, 19, 27, 40

Study on variety and specialization of local educational administration: Regional revitalization and educational administration

Research Project Leader: Director, Department for Educational Policy and Evaluation Research

■ Research outline

Based on a series of implementations of measures which can affect educational administration in local government, such as transition to a new board of education system in FY2015, correspondence to decentralization reforms, regional revitalization, and the depopulating society, this study aims to acquire comprehensive knowledge which contribute to plan measures of educational administration in local governments by verifying reality/challenge of educational administration in local governments and effect/influence of decentralization reforms and new board of education system.

In FY2016, we will undertake: to analyze factors from case studies of effective cooperation/harmony between board of education and administrative chief in local government, and compare those factors with those in other countries: to verify the variety of personnel affairs of faculty members: to analyze effects of school consolidation or closure to the region: and to analyze effect of higher education measures which is originated in the local government (university locations and influence to the students).
Study on curriculum to develop competencies

Research Project Leader: Director, Curriculum Research Center

Research outline

This study aims to provide integrated and comprehensive insights into curriculum development for nurturing competencies by verifying goals, contents, teaching methods and assessment. To this end, we closely examine teaching methods and learning activities, assessment and various supporting measures to nurture competencies which are deliberated in the Central Council for Education.

In FY2015, we investigated the actual condition of implementation of "active learning" domestically and internationally, reviewing the trends in other countries and collecting relevant information especially on science and social studies. We compiled an interim report on the trends and practices for promoting "active learning" in other countries. Furthermore, we prepared for three reports, on the curricula and learning activities in other countries? Vol.2 overall trends and Vol.3 science-, and Vol.4 on theoretical study on ICT literacy.

In FY2016, we continue our research for providing data that contributes to policy-making by looking ahead to the ongoing deliberations of the Central Council for Education. In particular, we continuously: (i) conduct a theoretical study on "active learning" and its assessment; (ii) compare overseas cases of competency assessment; and (iii) collect, analyze, and investigate case examples of teaching methods and assessment at schools conducting practical research on nurturing competencies. The final report is to be published at the end of FY 2016.

Study on development of non-cognitive (socio-emotional) competence and scientific assessment method

Research Project Leader: ENDO Toshihiko (Senior Visiting Fellow/Professor, Graduate School of Education, The University of Tokyo)

Research outline

This study aims to reveal "non-cognitive competencies" focusing on socio-emotional competencies. We present (i) specific contents of socio-emotional competencies at each stage of each development during lifetime and (ii) methods of scientific measurement and description used in studies for those competencies. In relation to effective factors and environment that support and promote the development of competencies, we get information and data from research done inside and outside Japan. We aim to obtain insights which lead to more meaningful discussion about socio-emotional competencies, clarification of issues in Japan, and research design.

In FY2016, following on from the previous year, we intend to obtain insights of socio-emotional competencies for each stage and list the development process that gradationally promotes from infancy to adolescence. In addition, for infants, preschool 'children', pupils and students, we conduct experiments and surveys to measure socio-emotional competencies. For the purpose of obtaining knowledge, information, and data within Japan, we undertake small-scale experiments and collection analysis of preliminary data.
Study on secondary analysis on results of the National Assessment of Academic Ability

Research Project Leader: Director, Curriculum Research Center

Research outline

Based on the results of the National Assessment of Academic Ability, we aim to: (i) develop method(s) of utilizing data; and (ii) clarify insights obtained through secondary analysis of data (including specific initiatives implemented by schools that had high achievements) by analyzing data for several years.

In FY2016, following on from the previous year, we overview changes in research results over the years and in terms of data utilization we implement case studies of schools and the boards of education in order to clarify effective initiatives for academic development, including the introduction of specific cases. Furthermore, we carry out a basic study of research results for database creation and clarify insights obtained through various secondary analyses, such as the correlation analysis between results of academic ability surveys and those of questionnaire surveys and detailed analysis of responses to written questionnaire.

Study on English education at elementary school

Research Project Leader: Director, Department for International Research and Co-operation

Research outline

We perceive the state of achievement of progressive approach, such as provision of foreign language education as a school subject (with evaluation of students' performance) or foreign language activities (without evaluation of students' performance) from early elementary grades at experimental schools and curriculum exception schools. The initiative is analyzed from three perspectives: educational goal, teaching method, and evaluation. At the same time, we intend to classify and analyze issues surrounding foreign language education in elementary schools and aim to provide information useful for foreign language education in elementary schools through case examples of goal, teaching method, and evaluation in terms of the cooperation between elementary and junior high schools.

In FY2016, we undertake hearing surveys as well as study the situation in other countries to deepen our analysis of (i) the questionnaire surveys held at experimental schools and curriculum exception schools [respondents: administrators, teachers, pupils] and (ii) progressive approach for the boards of education.
Study on growing and learning during the transitional period from pre-primary to primary education and the quality of education and care in early childhood

Research Project Leader: Director, Early Childhood Education Research Center

Research outline

Transition from preschool to school education and the quality of Early Childhood Education and Care (ECEC) have been considered to be important globally. This study aims to provide information on children's growing and learning during the transitional period, especially with regard to contributing to the revision of the Courses of Study for Kindergartens. It also aims to obtain basic insights on the evaluation of the quality of ECEC, which will contribute to the future longitudinal studies covering early childhood and later childhood. More specifically, studies will be conducted on: (I) the method to figure out children's growing social emotional skills for learning during transitional period; suitable curriculum for this period, and (II) development of evaluation indicators to capture the quality of ECEC with the examination of the indicators by using them at the center-based in-service trainings.

In FY2016, for (I) the above, analyzation of the results of the surveys carried out at cooperated kindergartens in FY2015, and the follow-up surveys for the first graders will be conducted. Regarding (II), development of the indicators based on the results of trial assessment by such scales as ECERS3 and SSTEW, and study on the methods of using the scales at the center-based in-service trainings, will be conducted.

Comprehensive study on training, personnel allocation and continuous education of teacher to develop the qualifications and abilities of pupils

Research Project Leader: Director, Department for Elementary and Secondary Education Research

Research outline

The aim of this study is to conduct a comprehensive study on: (i) overall approach (training and continuous education) through their entire teaching career that enhances teacher's competencies for the purpose of securement of student's qualifications and abilities required in a new era; and (ii) measures (personnel allocation and management) that enable teachers and other specialized staffs to exercise their expertise including initiatives and enable the entire school organization to work effectively as a team. It is also aimed to obtain fundamental data contributing to educational policymaking.

In FY2016, based on knowledge obtained in FY2015, we advance further surveys and analyses in order to complete the final report.
Empirical study on allocation of teachers and class size

Research Project Leader: Director, Department of Research Planning and Development

**Research outline**

Concerning the development of the competencies of pupils and students, it is imperative to examine influence exerted by class size, allocation of teachers and teaching methods. In addition, at schools facing the issues such as bullying, non-attendance, and poverty, required task for teachers is becoming increasingly complex and diverse. Taking into account such circumstances, by utilizing data of prefectural assessment of academic ability, we empirically examine the effects of allocation of teachers and class size on academic ability and non-cognitive competencies and the effects of additional support to students for the purpose of alleviation of problematic behavior such as non-attendance. This study aims to provide fundamental data contributing to educational policymaking.

In FY2016, through questionnaire surveys to the boards of education and conducting experimental classes at school, we intend to carry out theme-based research and publish those outcomes on our website, once available.

Study on fostering of “teaching skills for ICT (Information and Communications Technology) use” during the period of teacher training course at universities

Research Project Leader: YOSHIOKA Ryoei (Senior Researcher, Department of Research Planning and Development)

**Research outline**

Taking into account the dissemination of interactive whiteboards to each school and a forward-looking discussion on introduction of digital textbooks, we conduct survey research on fostering of “teaching skills for ICT use” which is absolutely essential for teachers. In this process, we intend to get findings useful for improvement of various challenges such as curriculum with regard to fostering of “teaching skills for ICT use” that should be acquired during the period of teacher training course at universities. In particular, throughout the period of study, we carry out questionnaire surveys and hearing surveys to the universities which offer teacher training course and to the boards of education in local government, and hearing surveys to overseas universities which are actively engaged on fostering of “teaching skills for ICT use”. Furthermore, we intend to establish a committee of research collaborators, who are mainly the profession of college professor, in order to examine the teaching contents and teaching methods with respect to fostering of “teaching skills for ICT use” and the guidelines during the period of teacher training course at universities.

In FY2016, we advance further study through the questionnaire surveys to universities and the boards of education, and reviews of previous study.
A Study of Teaching and Learning Environments that Support Students' Growth

Research Project Leader: Director, Department for Higher Education Research

Research outline

This study is an empirical study that aims to show the relationships between university learning outcomes and the teaching and learning environment.

Based on the analyses of national-level survey data and case studies, the study aims to clarify whether the following aspects of the teaching and learning environment, including (i) institutional globalization strategies, (ii) university reform efforts in teaching and learning content and approaches, (iii) student diversity, and (iv) the size of student enrollment and class size have positive correlations with learning outcomes defined broadly as "students' growth," and measured by indicators such as the attainment of knowledge and skills, number of study hours and student satisfaction, development of civic competency and engagement, and retention and graduation rates.

Research activities for FY2016 include literature review, interviews, and the analyses of existing survey data.
National Assessment of Academic Ability

This assessment is carried out by MEXT with the cooperation of boards of education and incorporated educational institutions, among others. In order to maintain and enhance the standards for equal opportunity in compulsory education throughout Japan, it seeks to examine the outcomes of and challenges for education and educational policies while making improvements therein, by studying and analyzing the current state of schoolchildren’s academic achievement at the national level.

Outline of Assessment (2016)

<table>
<thead>
<tr>
<th>Schedule</th>
<th>The assessment for FY2016 was carried out on Tuesday, April 19, 2016.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>The target populations are 6th-year pupils from elementary schools and the elementary department of the Schools for Special Needs Education, as well as 3rd-year students from lower secondary schools, the early course of secondary schools, and the lower secondary department of the Schools for Special Needs Education.</td>
</tr>
<tr>
<td>Content</td>
<td>Test items are divided into those mainly related to “knowledge” and those mainly related to “application.” Questionnaires for both students and schools are also distributed to survey lifestyle habits, the learning environment, etc.</td>
</tr>
<tr>
<td>Subjects tested</td>
<td>Japanese, arithmetic/mathematics, and science (Science is carried out every three years, the last time was in 2015)</td>
</tr>
</tbody>
</table>

In this assessment, NIER is responsible for developing subject test items and the related explanatory materials, analyzing the assessment results, and preparing the reports. The purpose of the subject test assessment is to examine whether individual students have adequately learned the basic knowledge that forms the foundation of the contents laid out in the Courses of Study, as well as whether the students are able to use the knowledge and skills they have learned. Thus, based on the goals and contents of the Courses of Study, NIER develops test items that (1) give a clear message on the type of skills students will acquire, (2) are of particular importance in educational guidance, and (3) facilitate students’ efforts to improve their own learning and problem-solving. The contents of the test questions are classified as follows:

(A) Items mainly related to “knowledge”
Content that, if not learned, will affect students’ potential to learn in the following grades, and the knowledge and skills that are so critical to life that students should desirably be able to apply them at all times.

(B) Items mainly related to “application”
Content related to students’ ability to use knowledge and skills in various real-life situations, and the skills necessary to plan, practice, evaluate, and solve various problems.

<table>
<thead>
<tr>
<th></th>
<th>Number of schools</th>
<th>Number of students included in the assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary schools</td>
<td>19,522</td>
<td>1,034,957</td>
</tr>
<tr>
<td>Lower secondary schools</td>
<td>9,906</td>
<td>1,038,129</td>
</tr>
</tbody>
</table>
International Educational Cooperation Activities and International Joint Research

In collaboration with MEXT, NIER implements and examines the surveys of the Organization for Economic Co-operation and Development (OECD) such as the survey for the Programme for International Student Assessment (PISA), and analyzes and publishes the results, and also implements the survey for the Trends in International Mathematics and Science Study (TIMSS) of the International Association for the Evaluation of Educational Achievement (IEA) and analyzes and publishes those results as well.

[Collaboration with OECD]

Japan participates in the Programme for International Student Assessment (PISA), an international assessment of student performance conducted by the OECD. NIER is responsible for implementing PISA in Japan, conducting assessments of 15-year-olds in the three areas of reading, mathematics and science once every three years. To date, five surveys have been conducted—in 2000, 2003, 2006, 2009, and 2012—and when their results go public, NIER plays a central role in producing Japan's national reports on the international results.

The sixth assessment was carried out in 2015, centering on science, with almost 70 countries and regions participating, including 34 OECD member countries. It changed over from paper-based to computer-based testing for the 2015 assessment, and its result is scheduled to be released in December 2016.

The PISA results published worldwide have thus far had a significant impact on educational policy and on educational personnel in all countries. Publication of the Japan’s national reports on the international results has drawn great attention, and the results are actively used in MEXT’s policy-making and in discussions held by the Central Council for Education as well as other entities. The results of the study also led to the launch of the national-level assessment of academic performance in Japan. Thus, this study has had an important impact on issues of academic achievement, which has been a cause of great concern in Japan in recent years. For example, PISA had a large influence on decisions concerning the direction of educational policy and administration in the revision of the Courses of Study in Japan, such as increased classroom hours, accelerated implementation of some content in mathematics and the sciences, and the adoption of efforts to heighten children’s motivation and interest in learning as a basic policy.

In addition to PISA, NIER is engaged in several other OECD studies that Japan participates in, such as the Programme for the International Assessment of Adult Competencies (PIAAC) and the Teaching and Learning International Survey (TALIS), and published those national reports in October 2013 and June 2014 respectively, timed with the release of the international results. Those results have made a great impact on the discussion of future education policies in Japan.

NIER takes part in the activities of the OECD’s Group of National Experts on Effective Learning Environments, which was established to enhance the quality of necessary educational facilities and equipment, and also exchanges information with those parties from various countries that are also concerned with school facilities.
[Collaboration with IEA]

Japan participates in the Trends in International Mathematics and Science Study (TIMSS), which is a project administered by the International Association for the Evaluation of Educational Achievement (IEA), and NIER is responsible for implementing this project in Japan.

TIMSS investigates the mathematics and science achievements of 4th- and 8th-grade students and the various educational conditions surrounding them. TIMSS has been conducted every four years since 1995, and this project followed the First International Mathematics Study (FIMS), which was implemented by the IEA in 1964.

There is extensive interest in academic achievement in mathematics and the sciences in Japan. The results of the international comparison in TIMSS have been submitted to the Central Council for Education as references for the discussion, and contributed to the deliberations on curriculum revision.

The TIMSS 2015 main study was carried out in March 2015 with the cooperation of the boards of education of prefectures and cities. The target of the study was approximately 4,400 4th-grade students from 150 elementary schools, and approximately 4,400 8th-grade students from 150 lower secondary schools, all of whom were selected by nationwide random sampling.

The TIMSS project operates on a 4-year cycle. The TIMSS 2015 project will conclude in FY2016, and the results of the international comparison—which will provide analyses and reviews of mathematics and science question items as well as questionnaires given to students, schools and teachers, etc.—will be published.

[Collaboration with the International Tuning Academy]

Since 2015, NIER has been acting as the Tuning Japan National Center, the contact point for Japan with respect to Tuning activities coordinated by the International Tuning Academy.

Tuning is a methodology for developing common understandings among faculty and stakeholders about higher education learning outcomes and competences in the disciplines, and for designing, implementing, and enhancing learning outcomes based degree programs. The Tuning approach has been embraced by universities worldwide, including North and South America since its European launch in 2000.

Since 2014, as part of the Tuning effort, NIER has been leading a faculty collaborative project aimed at developing a “test item bank” in the field of mechanical engineering. The test item bank is a platform for concrete-level discussion about abstract-level learning outcomes and competence frameworks, through the joint development and sharing of assessment tools. As of 2016, a total of 47 faculty members from 21 institutions have worked through a network of three regional centers, and have successfully developed and pilot tested 10 constructive response tasks and 47 multiple choice questions, part of which were implemented large scale in June-July 2016. Through close contact with international colleagues in the EU funded Tuning initiative, Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe (CALOHEE) as well as the Japan International Cooperation Agency (JICA) supported ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-Net), ongoing efforts are being made to ensure the international compatibility of test items.

NIER maintains a Tuning Japan National Centre website for disseminating information on Tuning and related projects.
Collaboration with educational research institutes in other countries


As a result of the Japan-China-Republic of Korea (ROK) trilateral summit meeting—during which leaders from the three nations agreed to enhance both person-to-person and cultural exchanges—the heads of the national institutes of educational research from Japan, China, and ROK gather on a regular basis to deepen their understanding of the significance of promoting international exchanges and cooperation and to discuss measures for encouraging such exchanges and cooperation among the three research institutes.

The 5th Meeting was held in Korea in November 2015. With regard to the implications of the “Education Agenda and Global Cooperation in the Post 2015 Era” based on the outcomes of the World Education Forum held in May 2015, the representatives described how they had moved ahead with their own action plans. After that, they discussed the theme of future cooperation plans among the three institutes. In the near future, two directions: (i) the holding of academic joint meetings and seminars, and (ii) the broadening of cooperation involving wide-ranging educational research bodies in south-east Asia and regional authorities such as UNESCO Bangkok and SEAMEO, were agreed on by all in this summit meeting.

The next meeting is scheduled to be held in Beijing, China in November 2016.

From left to right (as of Nov. 2015):
Tatsuya Otsuki, Director General, National Institute for Educational Policy Research of Japan
Sun-Geun Baek, President, Korean Educational Development Institute
Yan Wang, Head of Delegation, Department for International Exchange, National Institute of Education Sciences of China

List of International Exchange Agreements

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<tr>
<th>Date</th>
<th>Counterpart</th>
<th>Subject matter</th>
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| November 25, 2011| The National Institute of Education Sciences of China
Korean Educational Development Institute | Trilateral exchanges and cooperation in the field of education among the three institutes |
| November 1, 2006 | Korean Educational Development Institute                                    | Research exchanges and cooperation                                              |
| November 1, 1985 | China National Institute for Educational Research (currently known as the National Institute of Education Sciences) | Exchanges of documents and information on education                             |