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The 2019 5th International Conference on Education and Technology (ICET 2019), held at 3-5 October at Kota Batu, Jawa Timur, Indonesia, is organized by Faculty of Education, Universities Negeri Malang supported by its partners which is to be held in Malang, East Java, Indonesia. In general, the 2019 5th ICET is presented in series for increasing quality and management associated with previous events for 2015 1st International Conference in Education and Training (ICET), 2016 2nd International Conference in Education and Training (ICET), 2017 3rd International Conference in Education and Training (ICET), 2018 4th International Conference on Education and Technology (ICET) has been recorded in IEEE with ID Number is 45021 for the Technical Co-Sponsor.

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### PREFACE

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Education, as the foundation of a nation, needs to be improved on an on-going basis. Various steps have been taken to achieve a better quality of education that can align with developed countries around the world. Improving the process of education, research development, expansion of community service, the improvement of scientific activities, including scientific conferences, are the efforts to improve the quality of education.

This 5th International Conference on Education and Technology (ICET 2019) is one step in disseminating knowledge that is set at a scientific meeting in the field of education. The conference provides a channel for educational researchers and practitioners to share knowledge in order to improve the quality of education. In 2019, this conference is part of the main activity program of FIP JIP (Forum of Faculty of Education and Department of Education) 2019 that organized by Faculty of Education Universitas Negeri Malang (UM) in collaboration with faculty of education from 12 state universities producing educational staff in Indonesia. Faculty of Education UM feels honored to be a host of this prestigious conference.

The theme of the conference is “Reorientation of Education in the Era of Industrial Revolution 4.0 in Nation Development”, with featured keynote speakers from various countries including USA, Finland, Taiwan, Malaysia, and Indonesia. The purpose of this conference is to share our ideas and strategies to improve education system in era of industrial revolution 4.0. The conference also facilitates the lecturers, principals, supervisors, teachers,



students, or all who have attention to education to express and share the ideas through writing and presenting articles of the conference about how to improve the quality of education in the era of technology development.

On behalf of the faculty of Education UM, we thank you for the cooperation that has been given at this conference. In addition, we appreciate all the audience and participants, specially the deans, vice deans, head of departments, secretary of departments, head of study programs, the keynote speakers, the chairman of the event, the committee and the crews, the reviewers, and all the rest that I cannot mention one by one who highly participated in the conference.

Hopefully, this conference is useful for all, especially to solve the problems and develop the education system in line with the development of technology in industry revolution of 4.0. In addition, we hope this conference can contribute to improving the quality of education in particular and global.

May Allah SWT bless all our efforts to support this conference successfully.

On behalf of the Organizing Committee  
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PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON EDUCATION AND TECHNOLOGY  
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### The Use of Basic Data of Education (DAPODIK) in the Implementation of School Administration: A Study in Elementary Schools in Bilato, Gorontalo, Indonesia

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utilization, basic data of education (DAPODIK), school administration

#### Abstract

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# The Use of Basic Data of Education (DAPODIK) in the Implementation of School Administration: A Study in Elementary Schools in Bilato, Gorontalo, Indonesia

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**Abstract:** The objective of this research is to explore the use of Basic data Education (henceforth will be referred to as DAPODIK) in the administration of (1) facilities and infrastructure, (2) students, (3) teachers, and (4) learning outcomes in all public elementary schools in Bilato sub-district, Gorontalo regency. This qualitative research employed case study analysis; it is intended to have an in-depth description of an actual situation or phenomenon in a particular area. The data collection involved processes, e.g., observation, interview, and documentation. These data were further analyzed by using some steps, i.e., data reduction and data display. The results reveal that the use of DAPODIK in the administration of (1) facilities and infrastructure, (2) students, and (3) teachers in all public elementary school in Bilato sub-district, Gorontalo regency has been well-implemented according to the record of DAPODIK data. Although the use of basic data of education in the administration of (4) learning outcomes in the research site is in accordance with the data of DAPODIK, schools are yet to fully utilize the process and the recording of the data at the higher level.

**Keywords:** utilization, basic data of education (DAPODIK), school administration

## I. INTRODUCTION

The Ministry of Education and Culture has established the Instruction of the Minister of Education and Culture No. 2 of 2011. This instruction asserts that all educational units are required to carry out data collection through a system prepared by the main unit (Directorate General of Primary and Secondary Education). The data sent to this system will be used for the entire preparation of educational programs be it assistance, grants, benefits, subsidies, and others. Such individual data function as a prerequisite for channeling funds the transactional activities between the Ministry of Education and Culture with Provincial / District / City Education Offices and education units.

For this reason, the Ministry of Education and Culture of the Republic of Indonesia has launched an application called DAPODIK DAS and DAPODIK DASMEN for secondary and high school respectively. The use of data has been of great help to the regent and provincial education offices. DAPODIK helps the process of retrieving data of students, teachers, and schools; this system is used for the management of school data. The system also functions as a guideline or a consideration in managing all education and educational data.

However, not all the data inputted to the DAPODIK system are received to its server despite the school operator

update the data regularly. DAPODIK is used nationally to update all education data throughout Indonesia. The DAPODIK application only produces data sent by school operators; this sometimes causes teachers' complaint due to errors in their data. As a result, the problem has an impact on the distribution of benefits provided by the government to the teachers.

The DAPODIK application has not guaranteed a shortage of teacher personnel in Bilato sub-district. The Education and Culture office in both provincial and regency level is unable to use DAPODIK to organize teachers and answer the complaints of education area coordinators in Bilato sub-district. In other words, the lack of educators will influence the process of teaching and learning activities in the classroom. The issue mentioned previously signifies poor implementation of DAPODIK in terms of data input and verification. Such a problem urges an in-depth study to find a solution for the use of DAPODIK in supporting school administration. The problems in retrieving data from DAPODIK in Bilato sub-district mostly revolve around the distribution of teachers' additional allowances. This also affects the distribution of scholarship for students well-known as BOS funding. Some of the data are invalid by which it hinders the central server to read the data. The problem also blames the use of DAPODIK system by the school. It is revealed that the concern of DAPODIK utilization affects the provision of facilities by the

Educational and Culture Office of Gorontalo regency. This is because the office does not directly monitor the input process by the school operator. Consequently, this hinders the provision of school facilities and infrastructures by the government of Gorontalo regency. DAPODIK application has the feature of students' mark (encompassing their semester and national examination score) data input. Despite that, it is shown that grade promotion of the students is determined manually by homeroom teachers as the application of DAPODIK is unable to manage such processes every semester.

The advantage of DAPODIK is that the centralized system ensures the confidentiality of the data of school administration. Furthermore, the system is updated regularly. There has been some improvement in version 2018b. patc1.0 from version 2018a. by the central server. This update allows the operator of DAPODIK in every school to input the students' score through their account. Previously, only teachers or homeroom teachers that are allowed to input the score. Such an improvement enables the school operator to send the data to the server faster.

The issues mentioned previously urge the researcher to conduct a study entitled *The Use of Basic Data of Education (DAPODIK) in the Implementation of School Administration: A Study in Elementary Schools in Bilato Sub-district, Gorontalo Regency*.

## II. THEORETICAL FRAMEWORK

### A. DAPODIK Data Input Computer Application

There are some definitions of the term computer application. This present study uses the definition of a computer application by the Indonesia Dictionary (*Kamus Besar Bahasa Indonesia*, 1998:52). The term is defined as the implementation of a system designed for processing data using a particular programming language. In other words, the computer application is a computer program designed for performing specific tasks of its users.

### DAPODIK Application

DAPODIK Application is a system for managing micro educational data in an online and real-time fashion; this application is designed for the education units. There are three main educational data managed by DAPODIK system, e.g., (1) school data; (2) student data; and (3) teacher data (4) data on facilities, infrastructures or other education personnel at the school.

DAPODIK is an integrated, nation-wide data collection system functioning as the main data source of national education. This system is a part of the national education planning program in producing smart and competitive Indonesian people. Without careful education planning, all programs designed from the plan are unable to meet the expected goals.

The DAPODIK system is designed on the basis of open source by implementing a centralized database system and web-based applications. With this system, processes, e.g., managing a history of school data, students, teachers or education personnel are more easily integrated and stored centrally. The data can be accessed more easily and openly by the community within certain limits through the internet.

### B. Definition of DAPODIK

DAPODIK, or basic educational data, is an integrated, nation-wide data collection system functioning as the main data source of national education. It is the component of the national education planning program in producing smart and competitive Indonesian people. That being said, every educational system should incorporate DAPODIK system. The integration of the system enhances educational planning. Otherwise, all the plans are unable to meet the expected goals.

### C. Defining School Administration

According to Mulyono (2008: 41), the administration is an intensive service. This narrow definition is mainly defined as "systematic information compilation activities and written records of all necessary procedures aiming at obtaining an overview of the statements as a whole and which correlated to each other".

## III. METHOD

### A. Research Design and Approach

This study employed a qualitative approach.

### B. Data

The data were generated from the records of the school administration system within DAPODIK data in Bilato sub-district, Gorontalo regency.

### C. Sources of Data

The sources of the data referred to the informants in the research site; they were categorized into several criteria, such as a) the subjects have been associated with the research for a long time, b) the subjects are still active in the research site, c) subjects with plenty of time to ask for information, d) subjects that relatively provide actual information and e) subjects with less engagement with the research focus. The informants are: (1) school principal, (2) teachers, and (3) operators of DAPODIK.

## IV. RESULTS AND DISCUSSION

### A. The Use of DAPODIK in Administration of Facilities and Infrastructures

The use of DAPODIK in the administration of school facilities and infrastructure is based on the condition of the school. The input process by the school operator to the application determines the provision of the facilities and infrastructures by the central institution. It is expected that the input process enables to provide clear and precise data as it helps the distribution of school needs; the process also allows the school operator to maximize their works to input the data based on the request of the school principal and the teachers.

Asnawir (2004) points out that facilities and infrastructure are all needed to achieve the goals of an organization or institution. This functions to ensure the smooth performance of the organization regularly, effectively and efficiently. Educational facilities are equipment that is directly used in achieving educational goals, while education infrastructure is a facility that indirectly supports the achievement.

Bafadal (2003) defines the term educational facilities as all equipment, materials, and tools that are directly used in the education process at school. In addition, Bafadal

argues that educational infrastructures are basic needs that are directly used in the education process at school.

The contribution of all school communities is essential to enhance the administration of facilities and infrastructures. The most important thing in utilizing administrative data on facilities and infrastructure is the accuracy of the data inputted by the operator must be in accordance with the actual data in the school.

The use of DAPODIK in teacher administration in all elementary schools in the research site has been implemented according to the national standard. The data provides information to students and teachers in identifying deficiencies and conditions of school facilities and infrastructure, some of which are classrooms and learning media. In addition, information that can be obtained through DAPODIK displays the condition of the number of tables and chairs used by each classroom. This information helps the education office and the central government to provide educational facilities and infrastructures (Figure 1).

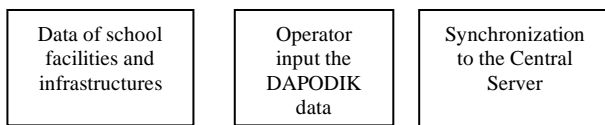


Figure 1

Conceptual Framework on the Use of DAPODIK in Administration of School Facilities and Infrastructures

### B. The Use of DAPODIK in Student Administration

It is supposed that the procedures of student administration of all elementary schools in Bilato sub-district, Gorontalo regency using DAPODIK system provide the data needed by the students; this can be done by accessing the online school profile-the school operator can also access the data. Furthermore, the data input involves the contribution of parents, homeroom teachers, and the school principal to help the operator.

Student administration refers to the management and services relating to students in a school. The process ranges from planning new student admissions, assisting students until they complete their education. The objective of student administration is to promote a conducive learning atmosphere. The task of the principal and teachers is to provide services based on the students' needs and the limits of authority, expectation and school regulations.

Tsauri (2007:2) asserts that student administration is integral to the implementation of an educational strategy to fulfill the students' needs according to their mental and physical development. There are numerous aspects that should be allocated by the school to attain the goal. Teachers play a major role in such management. This demands knowledge and experience in student administration process as it is intended to conceptualize effective and efficient management. In other words, student administration is among compulsory administration components in an elementary school. Both the school principal and homeroom teachers are responsible for student administration process. This paper discusses student administration process and its

objective in assisting prospective elementary school teachers in managing the students. Prospective teachers are not only required to have mastery over the theory; they are urged to implement all of the theories during the management of education.

This is to ensure the effectiveness of the use of DAPODIK in student administration by all related stakeholders. Among the examples is the provision of scholarship, such as the *Indonesia Pintar* (Smart Indonesia) program for students with poor economic background. Effective use of DAPODIK data also ensures that the scholarship is distributed properly (Figure 2).

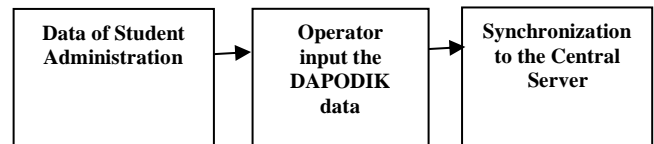


Figure 2

Conceptual Framework on the Use of DAPODIK in Student Administration

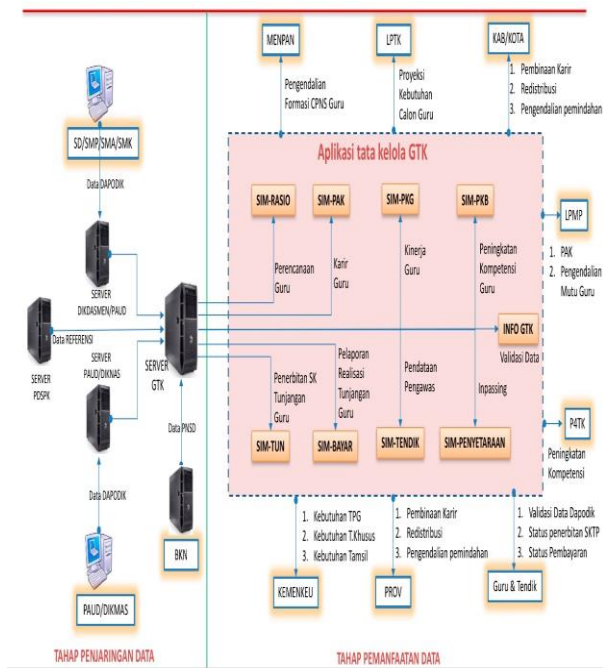
### C. The Use of DAPODIK in Teacher Administration

According to Daryanto (2005), teacher administration is a term describing a group of individuals collaborating in a school to attain a particular educational goal. It is also described as the set of management processes in organizing all workforces in a cooperative unit. Teacher administration is the whole process of organizing teaching staffs in schools effectively and efficiently to ensure that the objectives of the implementation of education in schools are optimally achieved.

It is revealed that the process of teacher administration in the research site has been implemented according to the system. However, there is an urge to improve teachers' participation in data input as the process significantly contributes to the distribution of the additional allowances by the education office. The data must be inputted correctly to prevent errors and other possible problems. It is clear that DAPODIK is utilized in schools in terms of existing data needs in schools according to the actual data. However, some data for the education office is still illegitimate.

This problem occurs during the issuance of a professional allowance decree for teachers through the education service teacher allowance management information system. There is a need for coordination between the education office and the school to match the invalid data with the data in DAPODIK. Educators are an important role in fulfilling their administration in school; they are responsible for organizing educational processes in schools. This suggests that educators should input the data correctly.

Teachers are among the elements of the educational system that are central to attaining the educational goal. From a wider perspective, they are responsible for both transferring knowledge to students as well as administrating educational process. Besides the issue of SKTP issuance that is not synchronous, the mutation data on BKD is invalid. This problem causes the teacher's data to be locked (Figure 3).



**Figure 3**  
Conceptual Framework on the Use of DAPODIK in Teacher Administration

**Description**

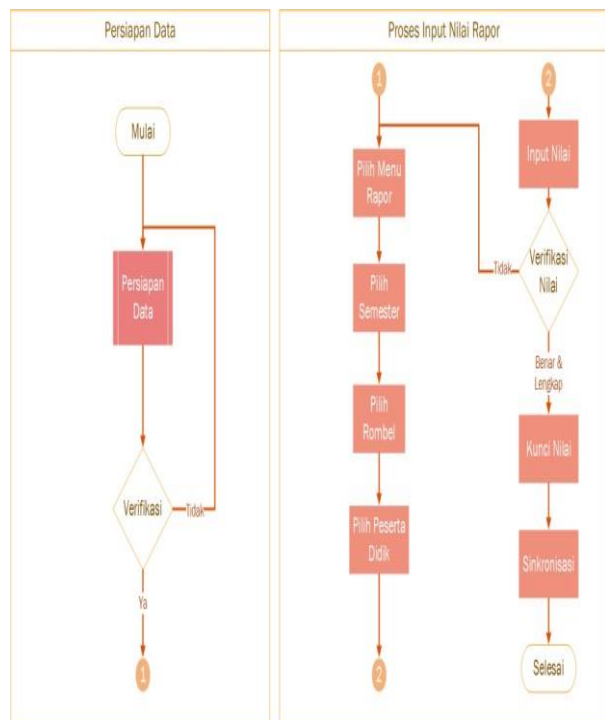
- SD/SMP/SMA/SMK: elementary school, secondary and high school, vocational school
- Tahap Penjaringan Data: Data Selection
- Pengendalian Formasi CPNS Guru: Organizing Formation of Probationary Civil Servants
- Proyeksi Kebutuhan Calon Guru: Projection of the Needs for Prospective Teachers
- Pembinaan Karir: Career Guidance
- Redistribusi: Redistribution
- Pengendalian Pemindehan: Transfer Control
- Perencanaan Guru: Teacher Planning
- Karir Guru: Teacher’s Career
- Kinerja Guru: Teacher’s Performance
- Peningkatan Kompetensi Guru: Teacher Competency Improvement
- Pengendalian Mutu Guru: Teacher Quality Control
- Validasi Data: Data Validation
- Peningkatan Kompetensi: Competency Improvement
- Validasi Data DAPODIK: DAPODIK Validation
- Status Penerbitan STKP: STKP Issuance Status
- Status Pembayaran: Payment Status
- Guru & Tendik: Teacher & Educational Professional
- Kebutuhan TKG: Needs for Teacher and Educational Professional
- Kebutuhan T.Khusus: Needs for Other Personnel
- Kebutuhan Tamsil: Needs for Additional Allowances

*D. The Use of DAPODIK in Administration of Students’ Evaluation Results*

The use of DAPODIK in the administration of students’ evaluation results in all elementary schools of Bilato sub-district is yet effective. This blames the paradigm of related stakeholders that the data of students’ evaluation result is not that essential by which the data

are yet to be categorized as a measurement of the students’ success (Figure 4).

Hamalik (2007) explains that learning outcome is a term describing changes in behavior in individuals that can be observed and measured by their knowledge, attitudes, and skills. These changes can be interpreted as an increase and development that is better than before; developments from those who don't know to know. Learning outcomes can be interpreted as the maximum results achieved by students after the learning process in a certain subject. Learning outcomes are not only represented in the students’ score, but also in their changes or improvements in attitudes, habits, knowledge, tenacity, reasoning, discipline, skills and other positive changes. Learning outcomes show the ability of students who have undergone a process of transferring knowledge (Figure 5).



**Figure 4**  
Conceptual Framework of The Use of DAPODIK in Administration of Students’ Evaluation Results

**Description**

- Persiapan Data : Data Preparation
- Mulai: Start
- Verifikasi: Verification
- Tidak: No
- Ya: Yes
- Proses Input Nilai Rapor: Rapport Card input
- Pilih Menu Rapor: Select Menu Rapport
- Pilih Semester: Select Semester
- Pilih Rombel: Select Classroom
- Pilih Peserta Didik: Select Students
- Input Nilai: Input Mark
- Verifikasi Nilai: Verification of Mark
- Benar dan Lengkap: Correct and Complete
- Kunci Nilai: Lock Mark
- Sinkronisasi: Synchronization
- Selesai: Finish

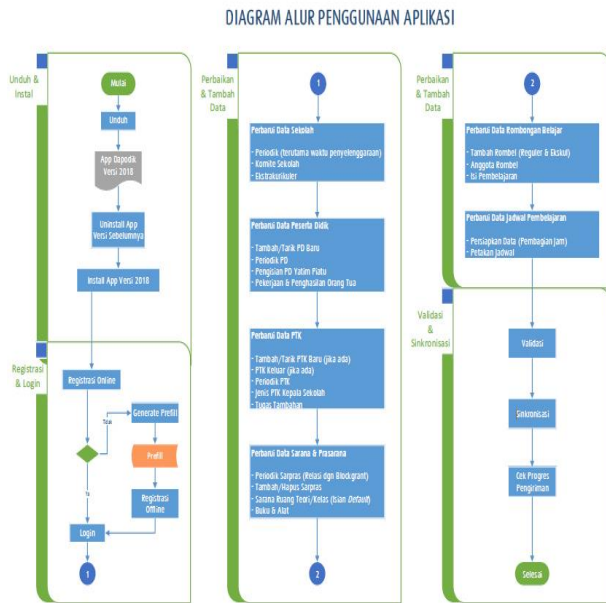


Figure 5 Contextual Diagram of the Use of DAPODIK in School Administration

**Description**

- Unduh & Instal: Download & Install
- Unduh App Versi Sebelumnya: Download Previous App Version
- Registrasi Online: Online Registration
- Perbaikan & Tambah Data: Improve & Add Data
- Perbarui Data Sekolah: Update School Data
- Periodik (terutama waktu penyelenggaraan): Periodic (especially implementation time)
- Komite Sekolah: School Committee
- Ekstrakurikuler: Extracurricular
- Perbarui Data Peserta Didik: Update Student Data
- Tambah/Tarik PD: Add/Withdraw Student
- Periodik PD: Student Periodic
- Pengisian PD Yatim Piatu: Student Orphan Form
- Pekerjaan/Penghasilan Orang Tua: Parent Job/Income
- Perbarui Data PTK: Update Teacher Data
- Tambah/Tarik PTK Baru (jika ada): Add/Withdraw New Teacher (if available)
- Periodik PTK: Teacher Periodic
- Jenis PTK Kepala Sekolah: Principal Responsibility (refers to subject taught by the principal)
- Tugas Tambahan: Additional Tasks
- Perbarui Sarana dan Prasarana: Update Facilities and Infrastructures
- Periodik Saprass (Relasi dgn Block Grant): Facilities/Infrastructures Periodic (Related to Block Grant)
- Tambah/Hapus Sarpras: Add/Delete Facilities/Infrastructures
- Sarana Ruang Teori/Kelas (Isian Default): Classroom (Default)
- Buku & Alat: Books & Media

- Perbarui Data Rombongan Belajar: Update Classroom Data
- Tambah Rombel (Reguler & Ekskul): Add Classroom (Regular & Extracurricular Class)
- Anggota Rombel: Members of Class
- Isi Pembelajaran: Learning Content
- Perbarui Data Jadwal Pembelajaran: Update Learning Schedule
- Persiapkan Data: Prepare Data
- Petakan Jadwal: Schedule Mapping

**V. CONCLUSION**

The conclusions of this present study are as follows:

1. The use of DAPODIK in the administration of facilities and infrastructures in all elementary schools of Bilato sub-district has been implemented according to the procedures of DAPODIK input nation-wide. Further, the DAPODIK has been utilized to input the data of the school condition accurately.
2. The use of DAPODIK in student administration in all elementary schools in the research site has been implemented according to the national standard. DAPODIK supports the accuracy of the data provided by parents and homeroom teachers based on the operator's request to assist the administration of data on students, especially in providing assistance to poor students through PIP by the central government.
3. The use of DAPODIK in teacher administration in all elementary schools in the research site has been implemented according to the national standard. Despite this, there are some issues of data inaccuracy in the issuance of teachers' allowance. It is revealed that the data that is confirmed valid by SIMTUN GTK does not match to the data by INFO GTK.
4. The use of DAPODIK in the administration of students' evaluation results in all elementary schools in the research site has been implemented according to the national standard. Still, the data are not used maximally, either in the school level or nation-wide.

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