

The Safety of School Facilities in Japan

In Japan, in order to secure safe and assured school life, comprehensive initiatives are being implemented in disaster management, prevention and reduction measures. Such measures include disaster prevention by reinforcing school facility disaster prevention functions, disaster response measures and support for recovering from disasters.

In addition, within the framework of school-safety, comprehensive initiatives such as regular facility inspections are being implemented so that school facilities can be used safely.

Section 1: Disaster management, prevention and reduction measures

1. Establishing a disaster management system

It is important to work on comprehensive, planned disaster management measures in order to promptly and appropriately deal with natural disasters such as earthquakes, tsunamis, typhoons, torrential rain, tornadoes, heavy snowfall and volcanic eruptions as well as accidents. In recent years, there have been many earthquakes including the 1995 Great Hanshin Earthquake, the 2011 Great East Japan Earthquake and the 2016 Kumamoto Earthquakes. For this reason, based on the Disaster Countermeasures Basic Act, the Ministry of Education, Culture, Sports, Science and Technology (hereinafter referred to as “MEXT”) Disaster Management Operational Plan has been formulated to lay out requirements for disaster management to enhance disaster management measures. In addition, with the MEXT Continuous Operational Plan for Response to Earthquakes in the Tokyo Metropolitan Area, various efforts are being made to establish a disaster management system in order to be able to continue with the minimum level of required operation that is important to the lives of citizens and which should not stagnate at the time of an emergency, under the authority of the Ministry.

Prefectures and municipalities are creating community disaster management plans based on the Basic Disaster Management Plan and the Disaster Management Operational Plan and so on and are preparing and enhancing disaster management systems in schools, etc.

2. Disaster prevention

MEXT is further enhancing disaster management education so that pupils can act appropriately by themselves at the time of a disaster. School facilities are not only places where pupils study and spend their school lives,

many play the role of evacuation shelter for local residents at the time of a disaster, various initiatives to reinforce school facility disaster management and prevention functions are being promoted.

(1) Disaster management education

In order for pupils to learn behavior that enables them to act independently to protect their own lives from danger in a natural disaster or similar, each school is conducting safety education such as disaster management education through school educational activities in related subjects and special activities based on Curriculum Guidelines. In addition to education that provides knowledge, more practical disaster management education is being provided. This includes evacuation drills as well as operational drills for evacuation shelters in cooperation with local residents and relevant organizations anticipating natural disaster, etc.

MEXT supports the provision of training for school personnel to help develop education methods and build safety management and cooperative systems with local residents and relevant organizations in response to local circumstances in order to deal with disaster management and other school safety issues in communities and schools.

(2) Reinforcing disaster management functions

At the time of a disaster, many school facilities are used as evacuation shelters. In the 2016 Kumamoto Earthquakes, there were many issues with school evacuation shelters such as damage to non-structural parts that made it impossible to use gymnasiums and various defects and inconveniences in securing toilets, electricity and water, etc.

For this reason, from the point of view of improving the disaster management functions of school facilities, MEXT has conducted a survey on whether school facilities had the required disaster management functions for evacuation shelters. In addition, MEXT disseminated the results of the survey together with a view that the disaster management divisions at local authorities play a central role in formulating individual school policy for defining 1) the required roles of the school, 2) the functions that should be available and 3) the facility use plans for evacuation shelters. The view also asked to build appropriate cooperation systems.

In addition to providing technical support to make school facilities resistant to disasters such as by earthquake-proofing, MEXT has been diffusing information and education concerning reinforcing disaster management functions to schools in various ways such as providing information gained from past disasters and organizing seminars that present good examples of local authorities that are working to create schools that are safe and secure.

Furthermore, as part of support for initiatives implemented by local authorities to reinforce tsunami measures and disaster management functions in public school facilities, there are government subsidies for conducting earthquake-proofing measures, moving and reconstruction of buildings in areas that are prone to inundation from tsunamis, installation of evacuation routes and external emergency stairways and preparation of stockpiling warehouses, outdoor toilets and electricity generators and so on.

	No. of schools designated as evacuation shelters	No. of schools with these functions	Percentage (%)
Disaster management functions relating to stockpiling (stockpiling warehouses, etc.)	30,994	22,326	72.0
Disaster management functions relating to drinking water (seismic storage tanks, etc.)		20,570	66.4
Disaster management functions relating to electricity (generators, etc.)		16,536	53.4
Disaster management functions relating to communications (communications equipment)		23,926	77.2
Disaster management functions relating to toilets when there is no water supply (manhole toilets, etc.)		15,339	49.5

*Schools with these functions including both structural and non-structural preparations.

Figure 1: Availability of disaster management functions at schools designated as evacuation shelters¹

(3) School facility earthquake-proofing measures

Public school facilities, in addition to being places where pupils study and spend their school lives, are evacuation shelters for local residents at the time of a disaster such as an earthquake therefore it is extremely important to ensure safety through earthquake-proofing. For this reason, MEXT prioritized the promotion of earthquake-proofing of public school facility buildings and measures to prevent the falling of suspended ceilings in gymnasiums, etc. with the goal of completion by the end of the 2015 academic year.

Through these initiatives, 99.2% of public elementary and lower secondary schools has been earthquake-proofed and 98.2% of gymnasiums, etc. have had falling prevention measures implemented for suspended ceilings as of 1st April, 2018; giving the situation that these measures are almost complete.

¹ Source: Ministry of Education, Culture, Sports, Science and Technology Survey on Disaster Management Functions of Public School Facilities as Evacuation Shelters (as of 1st April, 2017)

In addition to continuing to provide the required financial support for local authorities that have not completed implementation of these measures, MEXT is requiring their prompt completion. It is also predicted that there will be a rapid increase in the percentage of old municipal school facilities in the future. As deteriorated facilities have a high potential for damage to non-structural parts such as broken glass and falling interior and exterior materials at the time of earthquakes, disaster prevention function reinforcement and measures against deterioration including earthquake-proofing for non-structural parts other than suspended ceilings are being promoted.

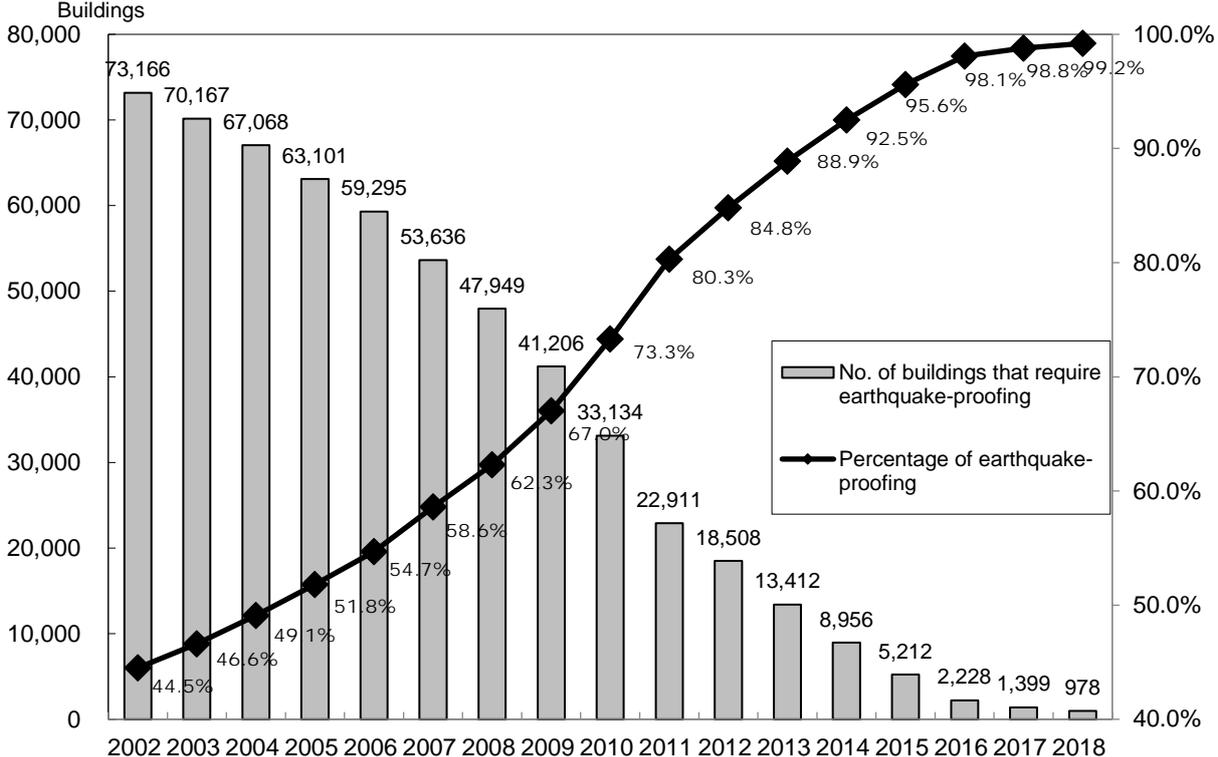


Figure 2. Progress with earthquake-proofing (public elementary and lower secondary schools)²

(4) Countermeasures against deterioration of school facilities

Up until now disaster management and prevention measures for public school facilities have been implemented to prioritize earthquake-proofing but, on the other hand, there has been an increase in the percentage of school facilities that are becoming old, causing defects in both the aspects of safety and functionality.

According to a survey implemented by MEXT in the 2017 academic year, there are approximately 32,000

² Source: Ministry of Education, Culture, Sports, Science and Technology Public School Facility Earthquake-proofing Improvement and Repair Status Follow-up Survey (As of 1st April, 2019)

annual occurrences of defects in safety such as falling of exterior walls or window frames in public elementary and lower secondary schools across the nation of which the principal causes are facility deterioration. Compared to the survey conducted in the 2012 academic year, which found approximately 14,000 defects, this is an increase of more than double.

Further, in keeping with changes in family and social environments, improvements in school facility function and capacity are required. These include setup of and improvement in study environments for teaching in small groups, etc. and ICT environments, accessibility, reinforcement of disaster management and prevention functions, installation of air-conditioning equipment, Westernization of toilet facilities and energy-saving.

In order to solve these issues, it is necessary to conduct planned maintenance on school facilities within a medium-to-long-term scope.

In addition, in MEXT public notices, both the Basic Policy on Facility Improvement for Public Schools for Compulsory Education and the Basic Plan for Facility Improvement for Public Schools for Compulsory Education (revised during the 2016 academic year) which lay out public school facility improvement goals, etc. state these issues and the necessity of conducting planned improvement for them.

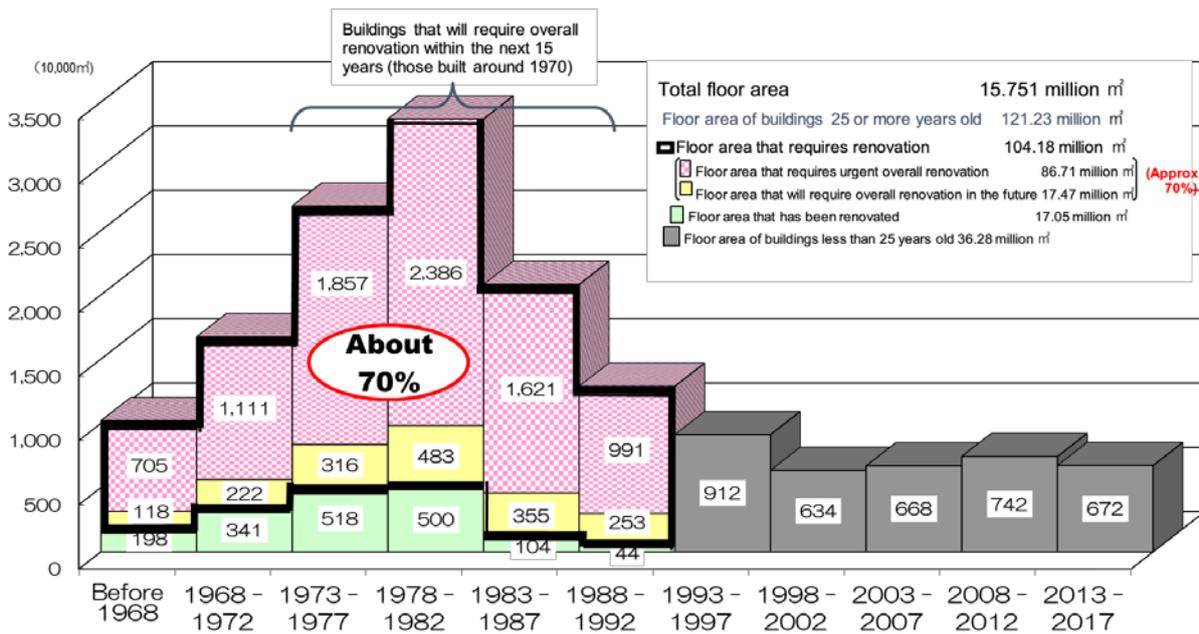


Figure 3. Floor Area held by public elementary and lower secondary schools by year built³

(5) Operation and maintenance

As the deterioration of school facilities progresses, there is concern that the safety and functionality that were secured at the time of construction will decrease and that the facility will no longer fulfill its required capacity. School facility managers are required to conduct appropriate maintenance so that it is possible to maintain the school facilities in a continually sound state.

For this reason, in addition to creating a guide to explain the methods for use and the importance of maintenance in particular, MEXT is surveying the status of implementation of maintenance inspections in national and municipal schools across the nation.

Efforts have been made to secure safety and reliable school life in educational environments through proper use and maintenance, including the May 2017 request to local school authorities to 1) prohibit wiping floors with water or waxing and 2) conduct daily inspections, with the aim of preventing accidents that cause injury due to protruding floorboards in gymnasiums.

³ Source: 2017/2018 Ministry of Education, Culture, Sports, Science and Technology Public School Facility Survey (as of 1st May, 2017). Of these, appropriated non-wood buildings categorized as school buildings, gymnasiums and dormitories.

3. Disaster response measures

MEXT has requested that relevant organizations such as prefectural boards of education work on collecting damage information and implement the necessary measures to secure the safety of pupils and prevent secondary disasters in the case of a natural disaster.

In addition, MEXT has created a system to dispatch educational facility emergency risk assessors to disaster areas to survey whether the facility can be used temporarily in response to demands from local authorities. This system aims to ensure the safety of people such as pupils and evacuated local residents from secondary disasters due to building collapse and falling objects caused by aftershocks, when educational facilities are damaged by an earthquake.

4. Support for disaster recovery, etc.

(1) Response to disasters that occurred in the 2017 academic year

The costs required for disaster recovery in municipal school facilities that are damaged by natural disasters are partially covered by the state (subsidy) so that educational activities can be conducted smoothly. The disaster recovery project for municipal school facilities damaged by the torrential rain in north Kyushu in July 2017 and other disasters qualified for special measures as it was designated as a Serious Local Disaster and the percentage of state funding was raised for each local authority according to its financial scale. In addition, there were government subsidies for part of the costs required for disaster recovery in facilities that had been damaged by disasters designated as Serious Local Disasters for the private school facility disaster recovery project.

(2) Response to 2016 Kumamoto Earthquakes

At 21:26 on 14th April, 2016, a magnitude 6.5 earthquake struck with the epicenter in the Kumamoto region of Kumamoto Prefecture and Mashiki-machi in the same prefecture recorded a seismic intensity of 7. Following this, there was a 7.3 magnitude earthquake in the same region at 1:25 on 16th April and Mashiki-machi and Nishihara-mura recorded a seismic intensity of 7. Four students and one member of school personnel died and 296 people sustained serious to minor injuries mainly in Kumamoto Prefecture. In addition, there were 1,597 instances of damage to nationally designated cultural properties and school facilities and so on.

MEXT has been working to support restoration of local cultural properties such as the Kumamoto Castle as well as school and social education facilities that were damaged, increased the numbers of supported school

personnel and counsellors and waived tuition fees for university students.

Section 2: School-safety

The safety of school facilities should not only be considered during construction or earthquake-proofing work. It is also essential within the school-safety framework to comprehensively work on the safety of children in everyday educational activities and in the operation and management of school facilities including regular inspections so that facilities can be used safely throughout overall educational activities.

1. Comprehensive initiatives relating to the safety of children

MEXT formulated the second Plan on the Promotion of School Safety in March 2017, based on the School Health & Safety Act that was enacted in April 2009, with the aim of having each school prepare and enhance ways to deal with various issues surrounding school-safety. This plan clarifies policy goals and the stance that should be aimed for as a basis for the promotion of school-safety and newly introduces policy to enhance safety education based on revised Curriculum Guidelines as well as response to new safety issues after the formulation of the first plan. In the future, initiatives for school-safety will be promoted based on the second plan.

2. Enhancing and securing the safety of children in schools

Schools are required to be places at which pupils can study with ease and it is necessary to promote initiatives in order to provide an environment in which their safety is maintained and prevent incidents and accidents at school.

For this reason, local financial assistance measures are being implemented to support costs relating to the installation of surveillance cameras, alarm equipment and Automated External Defibrillators (AED) and so on as part of safety measures. In addition, MEXT has produced school-safety document aimed at school personnel to contribute to enhancing safety education and management in schools. In February 2018, the Guide to Creating School Risk Management Manual, to which schools can refer to when creating risk management manuals, was revised based on various safety issues in recent years. Further, initiatives are being promoted with the aim of securing traffic safety on school routes such as encouraging continuous efforts including conducting regular joint inspections and improving and enhancing measures in each community along with encouraging traffic safety measures on school routes to be implemented in partnership with the relevant organizations including schools, boards of education, road managers and the police.

Moreover, based on the lessons from various accidents that have happened within school, and according to

discussions at the experts' conference Research into Response to School Accidents during the 2014 and 2015 academic years, the Policy for Response to School Accidents specifying the nature of post-accident response and preventing reoccurrence was formulated in March 2016.

Furthermore, in light of the current international situation, with respect to circumstances in which there is a risk of a sudden large-scale incidents such as terrorist attack, boards of education and other relevant organizations are being encouraged to implement initiatives such as conducting drills, reinforcing cooperation with the risk management divisions of local authorities and reviewing risk management manuals so that the safety of children at school can be ensured consistent with the direction of the Civil Protection Plan of each local authority and as part of school safety management.

3. Maintaining environments that protect the safety of children in the community

In order to ensure the safety of children not just at school but also when travelling to and from school, the organization of a system in which the whole community protects their safety is required. An example of an advanced case is the Safety Promotion School initiative.

In addition, MEXT has been working to improve the system in which the whole community protects the safety of children inside and outside the school using school safety volunteers since 2005. For example, there is support for initiatives to watch over children in the community such as former police officers patrolling schools as school guard leaders and providing guidance on must watch area for school safety volunteers.

4. Enhancing practical safety education

It is important to conduct safety education in schools so that pupils will cultivate the attitude and ability to respect their own lives and the lives of others, to have a practical understanding of matters required for safety in everyday life in general and to live a lifestyle of safety throughout life in the fields of traffic or disaster. Specifically, in order to ensure the safety of children, it is essential to promote practical safety education with the aim of cultivating the ability in children to foresee risks and avoid them.

For this reason, MEXT has created various kinds of teaching materials and documents for school personnel in addition to the reference materials for safety education based on Curriculum Guidelines, such as Safety Education in Schools to Foster a Zest for Life (revised March 2010 and Implementation of Disaster Management Education Foster a Zest for Life (revised March 2013) and their use is being encouraged. In addition, support is provided for practical safety education including traffic safety and crime prevention in each school through the Practical Safety Education Comprehensive Support Project Focusing on Disaster Management Education. Furthermore, so that it is possible for local authorities and schools to refer to

examples of superior initiatives and have access to information required to promote school- safety, a school- safety portal site containing documentation created by MEXT and local authorities, have begun operation in April 2016.

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学校施設の安全〔要約〕

日本では、児童生徒等の安全で安心な生活を確保するため、学校施設に係る防災・減災対策についての総合的な取組が実施されています。また、学校安全の枠組みの中でも、学校施設の定期的な点検を始めとして、総合的な取組が実施されています。

○防災・減災対策

・「災害対策基本法」などに基づき、「文部科学省防災業務計画」や「文部科学省首都直下地震対応業務継続計画」が策定されています。都道府県や市町村においては、「防災基本計画」や「文部科学省防災業務計画」などを基に地域防災計画が作成され、学校などにおける防災体制の整備・充実が進められています。

・災害時において児童生徒等が自ら適切な行動をとれるようにするため、文部科学省において、防災教育のより一層の充実が図られています。また、学校施設は、災害時には地域住民の避難所等としての役割を果たすことが多いため、防災機能の強化が推進されています。

・公立学校施設は、児童生徒の学習・生活の場であるとともに、地震などの災害時には地域住民の避難所等ともなることから、耐震化によって安全性を確保することは極めて重要です。公立小・中学校の平成30年4月現在の耐震化率は99.2%、屋内運動場等の吊り天井等の落下防止対策実施率は98.2%となり、おおむね完了した状況です。

・自然災害が発生した場合、被害情報の収集が努められるとともに、児童生徒等の安全確保及び二次災害の防止などに当たって必要な措置を講じるよう、文部科学省から都道府県教育委員会等の関係機関への要請がなされています。

・自然災害により被害を受けた公立学校施設において、教育活動を円滑に実施できるよう、施設の災害復旧に要する経費の一部が国庫負担（補助）されています。

○学校安全

・「学校保健安全法」に基づき、学校安全を取り巻く様々な課題に対して学校全体としての取組体制を整備充実させるため、平成29年3月に「第2次学校安全の推進に関する計画」が策定されました。

・学校は児童生徒等が安心して学習を行うことが求められる場所であり、安全対策として実施する監視カメラや非常通報装置、自動体外式除細動器（AED）の設置などに関する経費に対して地

方財政措置が講じられています。また、平成 30 年 2 月に「学校の危機管理マニュアルの作成の手引」が改訂されました。

・学校内のみでなく登下校時を含めた子供の安全を確保するためには、地域社会全体で子供の安全を見守る体制の整備が必要です。平成 17 年度から学校安全ボランティアを活用した地域ぐるみの学校内外における子供の安全を見守る体制の整備が進められています。