



Australian Government  
Department of Foreign Affairs and Trade

Education Learning and  
Development Module



**Diplomatic  
Academy.**



## **EDUCATION INFRASTRUCTURE**

Foundation Level

2019



# CONTENTS

Acronyms.....	3
1 Introduction .....	4
2 What do we mean by education infrastructure? .....	4
3 Accessible infrastructure .....	6
4 Types of education infrastructure and design criteria .....	7
5 Types of construction technology .....	11
6 Management of the infrastructure delivery process .....	12
7 How and why the Australian aid program supports education infrastructure .....	12
8 Maintenance of school infrastructure .....	13
9 Disaster risk reduction initiatives .....	15
10 Summary of key points .....	16
11 Test your knowledge.....	17
References and links.....	21



# ACRONYMS

BEDP	PNG Basic Education Development Program
DRR	Disaster risk reduction
ICT	Information communication technologies
INEE	International Network of Education in Emergencies
MoE	Ministry of Education
PNG	Papua New Guinea
RDI Network	Research for Development Impact Network
VIP	Ventilated Improved Pit
WASH	Water, Sanitation, and Hygiene



# 1 INTRODUCTION

The purpose of this module is to provide introductory information about the role of education infrastructure in development, the types of infrastructure, and design considerations including accessible design. It also provides an introduction to key stakeholders involved in education infrastructure and how infrastructure projects are managed. It provides a foundation to engage in this topic and apply advice from staff with operational or expert levels of knowledge in education. On successful completion you will be able to be an informed participant in forums related to educational infrastructure.

## 2 WHAT DO WE MEAN BY EDUCATION INFRASTRUCTURE?

School construction is a major undertaking in Australian aid programs. Australia has supported school construction in Papua New Guinea (PNG), Kiribati, Fiji, the Philippines, Indonesia, and Timor-Leste. Australia continues to provide support through the Global Partnership for Education.

### Examples of education infrastructure

Education infrastructure comprises a range of features, including:

- buildings
- water supply
- sanitation (toilets)
- complementary infrastructure including roads and power
- information and communication technologies (ICT)
- soft and hard landscaping
- play grounds
- fencing or boundary walls
- furniture and equipment.

### The role of education infrastructure

Good quality infrastructure facilitates the delivery of education within a safe, secure and comfortable learning environment. The objective of improving education infrastructure in support of education outcomes is to:

- provide universal access to education for all girls and boys,
- provide a safe, secure and comfortable learning environment which enhances the quality of the educational experience
- ensure the sustainability of educational benefits over the longer term



- provide a focal point for community activity.

## Key stakeholders involved in education infrastructure

There are multiple key stakeholders that are involved in the delivery of education infrastructure:

1. the school community (including faith based community groups)
2. school management (including faith based administrative bodies)
3. local, district, provincial and/or state governments
4. national government
5. private sector
6. civil society.

Taking an inclusive approach to the planning and implementation of value-for-money, good quality education infrastructure is critical to its sustainability. Working in partnership with key stakeholders, including both men and women, ensures that infrastructure is fit-for-purpose and meets the needs of the students, teachers and broader school communities. The respective roles of each group of stakeholders is explored below.

### School community

The school community refers to a diverse group of stakeholders, including teachers, parents, children, local leaders (traditional, spiritual, official), providers of goods and services, labourers and other members of the surrounding community. School communities contribute to the development and maintenance of school infrastructure by providing skills, labour and local materials; labour for gardening and landscaping; security and surveillance to keep schools safe, clean and healthy; and even providing funding or in-kind contributions, such as land. School communities may also play an important role in planning, prioritising and managing school infrastructure developments, through the participation in school management committees or parent-teacher associations.

### School management

School management may be appointed by government or the community depending on how schools are governed. School management is often responsible for the preparation of school infrastructure development plans and budgets, and the implementation and monitoring of these plans.

### Local, district, provincial and/or state governments

The role of different levels of government in the delivery of education infrastructure depends on the structure of government and level of devolution or decentralisation in the country. In many countries in the Asia-Pacific, the relevant government authority (local, district, provincial or state) may be responsible for: preparing the education component in the local/district/provincial education development plan covering infrastructure support; providing funding through district/local level government grants and oversight of funding



provided by local Members of Parliament and businesses; as well as supporting ongoing maintenance of education infrastructure.

### National government

National government is responsible for setting standards, agendas, and policies regarding education and education infrastructure. Such standards, agendas and policies impact the way school infrastructure is designed and built. For example, policies and/or standards may prohibit the use of specific materials, such as asbestos, or stipulate the implementation of disaster-resilient features. Budgeting of major infrastructure (such as school construction and teacher training colleges) may be funded from the national budget.

### Private sector

In some countries, the private sector is a key provider of education services, ranging from the design and construction of school infrastructure, the management and maintenance of school infrastructure, or even the ownership of school infrastructure. The role of the private sector is of increased importance in the education sector globally, and particularly in those countries where education provision by the state is limited or inadequate.

### Civil society

Meaningful engagement with civil society can deliver more resilient, inclusive and sustainable infrastructure. Often, given civil society actors have a deep understanding of local context and working relationships with communities, they can play an important role in prioritising, designing, implementing and maintaining new infrastructure. Civil society includes a diverse group of actors, including non-governmental organisations, universities, faith-based organisations, trade unions, and community groups. The Research for Development Impact Network (RDI Network) has developed [seven key principles](#) for implementing good practice and engaging civil society to delivery resilient, inclusive and sustainable infrastructure in the Pacific islands.

Source: RDI Network 2020, Building together: Seven principles for engaging civil society to deliver resilient, inclusive and sustainable infrastructure in the Pacific islands.

## 3 ACCESSIBLE INFRASTRUCTURE

### Disability inclusive infrastructure development

The Australian aid program's [Development for All 2015-2020: Strategy for strengthening disability-inclusive development](#), has identified inaccessible environments as major obstacles to achieving one of the Strategy's key outcomes, namely, 'improved quality of life for people with disability'. Improving access to the physical environment is one of the Strategy's priorities and will be a crucial element in reducing the vulnerability and isolation of people with disabilities and increasing their participation in society.

Source: DFAT 2015.



## Accessibility design guide

The Australian aid program's [Accessibility Design Guide: Universal design principles for Australia's aid program](#) was developed as a companion to the earlier Development for All strategy. The purpose of the Guide is to ensure that all of the Australian aid program's activities relating to the physical environment are accessible to persons with disabilities, and that the barriers to participation in social and economic life are minimised. Accessibility is viewed by the Australian aid program as a human rights issue and underpins every aspect of its approach to infrastructure development generally.

The Guidelines include an Education Annex which demonstrates how universal design principles can be incorporated into education infrastructure.

Source: AusAID 2013.

# 4 TYPES OF EDUCATION INFRASTRUCTURE AND DESIGN CRITERIA

## School buildings

The number of students to be accommodated in the classroom will normally be determined by the country's Ministry of Education. In PNG and most Pacific Island schools, for example, classroom sizes should accommodate 40 students, though in some rural and remote locations this could be as low as 20 students. Classes can be either single grade or multigrade. Multigrade can sometimes comprise up to three grades.

## Libraries, administration offices, staffrooms and storerooms

All schools could benefit from space for libraries or resource centres, administration offices, staffrooms and storerooms. How this space will be planned and constructed largely depends on the budget available, national or sub-national government policies and level of enrolment at the school.

## Specialist classrooms

In most developing countries the primary school curriculum can be taught in a general classroom. Secondary schools and some primary schools, particularly large schools in urban areas, require specialist classrooms for the teaching of science, practical skills, home economics or computer studies. These classrooms require special joinery and services and need to be designed by specialists. Due to the specialist nature of these types of buildings they are often expensive to build.

## Teacher housing

In many countries, housing is frequently provided to teachers, particularly in rural and remote areas. The house plans should reflect good design principles and comfortable living conditions. House designs in highland, lowland or coastal areas should be designed



differently to account for different climatic conditions. All houses should have access to clean water and sanitation facilities. It is good practice for wet areas, such as toilets and showers, to be constructed from durable materials such as concrete block walls with concrete or fibre cement flooring, and separated from dry areas. Safety and security measures should also be considered. Insecure housing design may be a barrier to the recruitment and retention of teachers, particularly women teachers.

### Does the school size determine how it is designed and constructed?

Small schools may only have one or two classrooms. Larger schools usually include multiple classrooms, offices, staffrooms, a library or resource centre, specialist classrooms and teachers' housing. Urban schools may have the majority of their buildings constructed from commercially manufactured materials while remote schools are often constructed from locally sourced materials, or a mixture of both.



### An activity for you

#### Reflection

Think about the different types of schools that you have visited for your country program or a developing country known to you. Reflect upon the infrastructure you have seen, noting their different features, materials used and size relative to the school population.



## School furniture and room arrangement

Classroom layouts need to accommodate both 'pupil-centred' flexible teaching approaches and the conventional 'teacher-centred' method. Conventional teaching methods have students arranged in rows, facing the chalkboard. Flexible teaching has students seated in groups, allowing for greater interaction between students and the teacher, and amongst students themselves. Where possible, classrooms may need to be designed for ICT provision.

The choice of furniture type should facilitate the organisation of classrooms in various layouts. Ideally, only well-designed and well-built furniture should be selected that is appropriate for all children, including those with disability. The Australian aid program's [Accessibility Design Guide](#) includes guidance on furniture type and room arrangement, emphasising child-centred learning environments, disability-inclusion, child safety, natural disaster preparedness and public health. This can be found in the Accessibility Design Guide's Education Annex.

Source: AusAID 2013.





## Pre-primary and early-primary school desks and seats

Pre- primary and early-primary school learning is most effective if children are seated on a combination of floor mats, at round tables or on bench seats.

## Primary and secondary school desks and seats

The size of the desk and seat needed will vary from grade to grade and country to country. In an ideal school two or three desk and seat sizes may be needed to cater for all. The desk and seat design should allow children to place feet flat on the floor and elbows comfortably on the desktop.

## Other furniture

A teacher's desk and chair should be provided for each classroom. Built-in shelves should be provided for libraries and store rooms. All classrooms should be provided with a chalkboard or whiteboard. However, it should be noted that whiteboards require special non-permanent markers which are more expensive than chalk, and in some locations, markers may not be readily available. Where separate administration buildings, libraries or specialist classrooms are planned then purpose-built furniture may be needed.

## Water, sanitation and hygiene (WASH) facilities

### Water

A good quality, easy to use, accessible water supply is important for protecting the health of all students, and teachers. Poor quality drinking water can cause diseases like typhoid and dysentery. Water is needed for washing and cleaning. Insufficient water can lead to poor hygiene, which can result in sharing of diseases and skin infections.

### Sanitation

The best type of toilet option for any school will depend on the availability of water at the school. Types of toilet facilities include: flushing toilets connected to either a septic system or the town sewerage system; pit toilets; ventilated improved pit (VIP) toilets, and composting toilets. Where the school is next to the sea or a river or there is a high water table it is often impractical to construct pit toilets or flushing toilets.

Schools should provide toilet facilities that are appropriate to the context in which they are being constructed. Separate sanitation for girls and boys is essential for hygiene and security reasons, especially as girls reach adolescence. The absence of suitable sex-segregated facilities is cited as a common cause of dropout for girls. All sanitation facilities need to be accessible by all, including those with a disability. In some contexts, it may be appropriate or necessary to construct separate WASH facilities for the teacher(s) as well.

### An activity for you

#### Reflection

For your country program or a developing country known to you: what approaches were used to provide WASH at schools?





## Power

Urban schools and some rural schools will have the option of connecting to a town supplied power grid. Some rural schools can connect to a diesel generator supply or a mini hydro. Budget permitting, schools may have the option of including solar or wind generator kits for some or all of their power supply.

The reality is that many schools have no electrical connection. The [Accessibility Design Guide](#) has practical suggestions for siting and designing schools that take advantage of natural light, while managing ventilation and climactic variation (e.g. heat, cold, rainy season).

Source: AusAID 2013.

## National infrastructure guidelines

Departments of Education establish and monitor national policy and guidelines for the delivery of education. These include guidelines on basic standards for school infrastructure. Infrastructure guidelines help to ensure that schools are aware of the best infrastructure options available. They provide schools and governments with standards and targets for education facilities. Infrastructure guidelines help schools prioritise their infrastructure needs and obtain appropriate technical assistance to design, procure build and maintain their facilities

Under the Australian aid program funded PNG Basic Education Development Program (BEDP), [National Infrastructure Guidelines for Primary Schools](#) were developed and published in 2010. These Guidelines include many good examples of the different types of education infrastructure, as well as design plans for different types of classrooms.

Source: Department of Education PNG 2010.

## Information and communication technologies (ICT)

ICT is now recognised in the [UN Sustainable Development Goals](#) as a catalyst for sustainable development. Investment in ICT can lead to economic benefits such as higher productivity, lower costs, new economic opportunities, job creation, innovation, and increased trade and exports. ICT technologies can be transformational in providing access to education services for poor people and strengthening social cohesion.

Secondary, technical vocational education and training and higher education infrastructure projects may have ICT as part of the infrastructure fit out. Some primary schools will also have access to ICT.

Note: The Australian aid program's [Accessibility Design Guide](#) includes a separate annex on ICT. Programs considering ICT investments need to take account of the recommendations included.

Source: UNDP 2019; AusAID 2013.



## 5 TYPES OF CONSTRUCTION TECHNOLOGY

### Construction technologies

There is no one best construction technology for building schools in developing countries. Available funds and materials, school environment, site location and environment all influence whether buildings are constructed using commercially manufactured materials, traditional materials, or a mixture of both. Regardless of the approach chosen, construction supported through the Australian aid program needs to consider safety and resilience standards.

### Building with traditional materials

Traditional material buildings are constructed by local tradespeople from local materials either donated by or purchased from the surrounding community. Communities may prefer to construct education infrastructure using local materials and in traditional designs to maintain the cultural heritage of the area.

Traditional material buildings are usually confined to the construction of elementary and primary schools. They are often not permitted in urban areas, where Building Boards require all buildings to be constructed to specified building codes and where contemporary building materials are more readily available.

### Buildings constructed from commercially manufactured materials

Commercially manufactured building materials include:

- treated plantation timber (termite-resistant)
- cement, industrially-manufactured concrete blocks and clay bricks
- corrugated iron and concrete or clay roofing tiles
- steel posts and metal wall cladding
- fibre cement weatherboard
- plaster board.

Buildings built from commercially manufactured materials can be constructed in kit-set form or from materials available from a hardware merchant, using plans supplied by government or commercial architects. Kit-set buildings have the advantage that they can be quickly erected and, as all the elements are factory manufactured, there is usually better quality control. However, it is important to consider the specific needs and context of each school in determining whether kit-sets are appropriate. Kit-sets are typically standard designs and may not be appropriate for the specific infrastructural needs of a given school. For remote schools the cost of transporting the kit-sets can be higher.



## Buildings constructed from a mixture of traditional and commercially manufactured materials

These buildings use commercially manufactured materials for key construction elements such as the building frame and roof, and are then in-filled using traditional materials. They are sometimes called 'core structures'. Core structures can be purchased from manufacturers in kit-set form or can be made up from materials available from a hardware merchant.

# 6 MANAGEMENT OF THE INFRASTRUCTURE DELIVERY PROCESS

## Education facilities management

Many countries have established an Education Facilities Management Office within their Ministry of Education to manage the delivery of education infrastructure. In some countries the design and construction of school infrastructure is the responsibility of a National Department of Works. In others, such as PNG, Local Level Governments have been responsible for the maintenance and construction of basic education infrastructure, the Provincial Governments for secondary and vocational schools, and the National Government for national high schools, teacher training colleges and higher education.

# 7 HOW AND WHY THE AUSTRALIAN AID PROGRAM SUPPORTS EDUCATION INFRASTRUCTURE

## Governance and the bigger picture

Improved education outcomes, enhanced employment opportunities and incomes, water and sanitation, sustainable energy, and ICT are all key benefits of cost effective and quality education infrastructure.

Australia's approach to delivering infrastructure programs does not solely focus on technical aspects. The Australian aid program also focuses on the following elements.

- The governance and policy arrangements needed to provide safe, sustainable and reliable infrastructure.
- Appropriate action to safeguard communities and infrastructure investments from environmental and social disruption risks.
- Promotion of disability awareness by ensuring that infrastructure is accessible to all, including persons with a disability.



- Integration of gender into infrastructure activities in order to ensure equality in access and provide equal opportunity for women and men to support economic growth and to help reduce poverty.

## Understanding the context

How education infrastructure resources are allocated and how effectively they are expended is a major challenge for education authorities. Legal issues, contested responsibilities, politicians bestowing infrastructure on favoured communities, and parents sending their children to better built schools, resulting in overcrowding, are all issues which donors need to consider when designing education infrastructure projects.

### Is education infrastructure gender neutral?

There is now increasing awareness among donors that infrastructure is not gender neutral. Inadequate attention has been paid in the past to the different needs of women and men in both design and delivery of infrastructure services. Infrastructure reforms have the potential to open up equal opportunities but experience has shown that unless special efforts are made, the benefits of reforms will not be shared equally between women and men. If there is inadequate analysis of the context and if gendered impacts are not factored into design and implementation, existing differences and inequalities will be exacerbated. In most cases, women have less representation in all aspects of decision-making, including with regards to facilities development.

### Are there other variables involved?

Gender is not the only variable. Any society is made up of people who have different levels of power, resources and influence based on variables such as age, education, ethnicity and where they live. Policy makers and decision makers need to be encouraged to identify and address these social and economic differences in all of their plans and interventions. Given their relationships with communities, civil society organisation can facilitate the engagement of marginalised groups within communities in infrastructure planning and delivery.

## 8 MAINTENANCE OF SCHOOL INFRASTRUCTURE

### The importance of maintenance of support

Infrastructure requires 'whole-of-life' maintenance support. This support will continue for the life of the infrastructure, which could be 40-50 years. This involves both preventative/planned maintenance and reactive/unplanned maintenance. Preventative maintenance includes daily activities such as cleaning, monthly activities such as cutting grass, and longer term planned maintenance such as painting and replacing building elements such as lights and roofing. Reactive maintenance refers to unforeseen repairs such as clearing blocked drains or major repairs required after events such as cyclones.



## Maintenance issues

Maintenance issues are particularly acute for education buildings, which receive high volumes of foot traffic and may be at risk of vandalism, misuse or even abuse. The Australian aid program and other donors have made significant investments in addressing maintenance issues in schools throughout the Asia-Pacific region. The PNG BEDP included a specific maintenance component which distributed over PGK10 million in grants to individual schools, between 2004-2010. Grants varied in size from K1000-K10, 000 depending on the size of the school.

### Who is responsible for school maintenance?

For most schools in developing countries, school maintenance is a shared responsibility of government (typically for major repairs) and the local community (typically for smaller repairs and routine upkeep). Funding for maintenance comes from multiple sources, including: the school community (directly and from School Operational Grants); local and national government; charitable donations and remittances; and sometimes development partners (including local donors, non-governmental organisations and philanthropic organisations). Many development partners support school grants schemes which may include resource allocations for maintenance.

### Capacity building projects

The Australian aid program has been involved in a number of projects that have built the capacity of school committees to manage the maintenance of their schools. These capacity building projects have encouraged schools to:



- set up School Budget and Planning committees to prepare school infrastructure maintenance and development plans based on realistic budgets
- establish a maintenance committee to deal with school maintenance
- identify people in the community with building skills to assist with upkeep and repairs
- promote the importance of good governance, transparency, accountability and self-reliance as a prerequisite for good education outcomes.

## Potential for corruption

Transparency International have noted that throughout the world, construction and public works consistently rank as the most corrupt sector of a nation's economy, and school construction in particular can be easily manipulated for corrupt purposes.

There are strategies that both donors and stakeholders can put in place that will minimise corrupt practices. World Bank studies in Africa have demonstrated that community-based programs with significant school community input, are considerably more cost effective than other approaches to school construction management. Community-based



construction and management are an effective means for mitigating corruption risk and therefore, reducing waste. This experience has been reflected in the Australian aid funded school construction and reconstruction programs in Indonesia.

Source: Nawaz, F. 2010, Programmatic Approaches to Addressing Corruption in the Construction Sector. Transparency International.

## 9 DISASTER RISK REDUCTION INITIATIVES

Schools are the centre of a community and often become refuges when violent conflicts and disasters occur. Climate change is contributing to increases in the frequency and/or intensity of extreme weather events, directly impacting on communities exposed to climate-related hazards such as droughts, floods, tsunamis and wave surges.

Disaster risk reduction (DRR) and reconstruction covers three different phases: Preparedness, Response and Recovery.

### Disaster risk reduction and reconstruction – three phases



#### 1. Preparedness

Schools should be designed as evacuation shelter sites in the event of a disaster. At least one of the buildings in the school could be assigned as a dedicated operations centre and its structure designed in accordance with multi-hazard design criteria.

#### 2. Response

Schools should be designed to provide a safe environment and temporary service delivery (e.g. medication, food, shelter) to vulnerable women and men, unaccompanied girls and boys, and groups directly impacted by the disaster (e.g. homeless). Schools should have accessible water and sanitation facilities.

#### 3. Recovery

The impact of a disaster on a school's physical infrastructure provides a valuable source of lessons learned that can be used to rebuild more resilient, accessible and higher quality school and community infrastructure.

**Note:** The International Network of Education in Emergencies (INEE) has produced [INEE Minimum Standards for Education: Preparedness, Response, Recovery](#), which outlines a minimum level of educational quality and access in emergencies through to recovery, as well as a [Guidance Notes on Safer School construction](#).

Sources: INEE 2010; INEE 2009.



## 10 SUMMARY OF KEY POINTS

- Education Infrastructure is the hardware, from buildings and civil works to furniture and equipment, that enables a defined curriculum to be taught in a learning environment that is safe, secure and comfortable for all girls and boys.
- While significant progress has been made in recent years in improving education infrastructure to meet improved education access and expectations, there still remains much to do in ensuring equal access and inclusion.
- Accessibility by all is viewed by the Australian aid program as a human rights issue and underpins every aspect of its approach to education infrastructure.
- Key education infrastructure comprises buildings and associated civil works, furniture, WASH facilities, power and ICT.
- There is no one best construction technology for building schools in developing countries. Funds and materials available, school enrolment, site location and environment determine whether buildings are constructed using commercially manufactured materials, traditional materials or a mixture of both.
- In most developing countries the Ministry of Education (MoE) has the role of establishing and monitoring national education policy and guidelines. In some countries, the provinces are responsible for the provision of education facilities and services in accordance with the MoE policy. Many countries have established an Education Facilities Management Office within their MoEs to manage the delivery of education infrastructure.
- Education infrastructure requires 'whole-of-life' maintenance support. This support will continue for the life of the infrastructure, which could be 40-50 years.
- There are multiple key stakeholders that are involved in the delivery of education infrastructure: the school community; school leadership; local, district, provincial and/or state government; national government; the private sector; and civil society.
- Schools are often the centre of a community and can become refuges when violent conflicts and disasters occur.
- Measures should be taken to ensure that education infrastructure supports disaster risk reduction initiatives at each stage: preparedness, response, recovery.





# 11 TEST YOUR KNOWLEDGE



## Assessment questions

Answer the following questions by ticking 'True' or 'False'. Once you have selected your answers to all the questions, turn the page to 'The correct answers are...' to check the accuracy of your answers.

### Question 1

Education infrastructure includes furniture and equipment as well as school buildings.

Is this statement true or false?

True

False

### Question 2

Good quality education infrastructure can provide a focal point for community activity.

Is this statement true or false?

True

False

### Question 3

Buildings must be constructed from high quality commercially manufactured materials to ensure a good learning environment.

Is this statement true or false?

True

False

### Question 4

Information and communication technologies (ICT) are not relevant in the rural and remote areas of developing countries.

Is this statement true or false?

True

False

### Question 5

The infrastructure needs of girls and boys are the same.

Is this statement true or false?

True

False



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### Question 6

Maintenance of school infrastructure is the sole responsibility of the Ministry of Works.

Is this statement true or false?

True

False

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### Question 7

At least one of the buildings in a school should be constructed in accordance with multi-hazard design criteria so that it can be used as a dedicated operations centre in the event of a violent conflict or natural disaster

Is this statement true or false?

True

False

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### Question 8

The best type of toilet option for any school will depend on the availability of water at the school.

Is this statement true or false?

True

False

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### Question 9

Sanitation facilities need to take account of the different hygiene and safety needs of girls and boys

Is this statement true or false?

True

False

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The correct answers are...



### Question 1

Education infrastructure includes furniture and equipment as well as school buildings.

**This statement is true.**

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### Question 2

Good quality education infrastructure can provide a focal point for community activity.

**This statement is true.**

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### Question 3

Buildings must be constructed from high quality commercially manufactured materials to ensure a good learning environment.

**This statement is false.** Education infrastructure may be constructed using either commercial or traditional materials, or a mixture of both. The use of materials will be determined by the availability of various resources, budget allocated and availability of skilled labour to use given materials. Communities may prefer to construct education infrastructure using local materials and in traditional designs to maintain cultural heritage of the area.

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### Question 4

Information and communication technologies (ICT) are not relevant in the rural and remote areas of developing countries.

**This statement is false.** The UN Sustainable Development Goals identify ICT as critical to sustainable development. Mobile phone technology, now widely used in rural and remote areas, can be used to tap into global ICT. Skills in the use of ICT also improve livelihoods opportunities and potential income for rural and urban people alike.

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### Question 5

The infrastructure needs of girls and boys are the same.



**This statement is false.** Privacy and security are a big issue for girls and can be a determining factor in whether they continue to participate in education, or not. Addressing such issues through education infrastructure development can be a contributing factor in ensuring girls attend and stay in school.

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### Question 6

Maintenance of school infrastructure is the sole responsibility of the Ministry of Works.

**This statement is false.** The responsible government department is determined by the structure of government and level of devolution of authority. In addition, in some countries, the private sector is the dominant provider of education services. Furthermore, one of the most effective methods for school maintenance is to have the community fully engaged in the management of the school including raising their own funds and employing local trades people directly to maintain school property.

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### Question 7

At least one of the buildings in a school should be constructed in accordance with multi-hazard design criteria so that it can be used as a dedicated operations centre in the event of a violent conflict or natural disaster.

**This statement is true.**

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### Question 8

The best type of toilet option for any school will depend on the availability of water at the school.

**This statement is true.**

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### Question 9

Sanitation facilities need to take account of the different hygiene and safety needs of girls and boys.

**This statement is true.**

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## REFERENCES AND LINKS

All links retrieved July 2020

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United Nations 2019, Sustainable Development Goals, <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

### Learn more about...

-  *The Strategy for Australia's Aid Investments in Education: 2015-2020, found at, <http://dfat.gov.au/about-us/publications/Pages/strategy-for-australias-aid-investments-in-education-2015-2020.aspx>*
-  *School Construction Strategies for Universal Primary Education in Africa, found at, <https://openknowledge.worldbank.org/bitstream/handle/10986/2637/488980PUB0prim101Official0Use0Only1.pdf?sequence=1>*