



United Nations
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Pacific
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Kiribati Education Data Quality Assessment Report

With support from



Australian Government

Department of Foreign Affairs and Trade

Ministry of Education

Tarawa, Kiribati

August 2017

Kiribati Education Data Quality Assessment Report

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Acronyms

CDU	Curriculum Development Unit
DFAT	Department of Foreign Affairs and Trade (Australia)
DQAF	Data Quality Assessment Framework
EAU	Examinations and Assessment Unit (MOE)
ECE	Early Childhood Education
EMIS	Education Management Information System
EPIK	Education Partners in Kiribati
ISCED	International Standard Classification of Education
JSS	Junior Secondary School
KEF	Kiribati Education Facility
KEIP	Kiribati Education Improvement Program
KEMIS	Kiribati Education Management Information System
KESP	Kiribati Education Sector Plan
KIT	Kiribati Institute of Technology
KTC	Kiribati Teachers College
MFEP	Ministry of Finance and Economic Planning
MLHRD	Ministry of Labour and Human Resources Development
MOE	Ministry of Education
NGO	Non-Governmental Organisation
NSDS	National Strategy for the Development of Statistics
NSO	National Statistics Office
PIFS	Pacific Islands Forum Secretariat
PPD	Policy and Planning division
SDG	Sustainable Development Goals
SPC	Pacific Community
SSS	Senior Secondary School
TSIMU	Technology Support and Information Management Unit
TVET	Technical, Vocational Education and Training
UNESCO-UIS	UNESCO Institute of Statistics
USP	University of the South Pacific

Executive Summary

The UIS/SPC joint mission took place from 26 July to 3 August 2016 with the purpose of providing a sector-wide review of quality issues in the production of education statistics in Kiribati. The mission team included staff from UNESCO Institute of Statistics, the Pacific Community and the Department of Foreign Affairs and Trade, Australian Government. The team members met the Honourable Minister for Education; Directors and senior staff of the Ministry of Education, Ministry of Labour and Human Resources Development; Ministry of Finance and Economic Planning; Australian High Commission; Kiribati Teachers College, Kiribati Institute of Technology; University of the South Pacific, UNICEF office and the Kiribati Pre-School Association.

The team conducted interviews using the DQAF methodology¹ to assess the quality of education statistics by conducting interviews with key actors of the data production chain. The responses to the interviews were then synthesised and form the basis for the analysis of the findings. The findings are grouped into three groupings related to the statistical environment, the production of statistics, and statistical products.

Statistical Environment: The staff resources for compiling statistics are generally adequate to perform the required tasks for producing quality statistics. However the enabling environment is somewhat constrained by the lack of financial resources, human capacity, and legislative and regulatory mandates for the collection of sector-wide statistics. In particular, it was found that the responsibility for collecting, processing, and disseminating statistics is not clearly specified; data sharing and coordination among MOE divisions and external agencies are not adequate; there are no regular consultation meetings with data users to discuss the coverage of education statistics.

Production of Statistics: While the methodology used to collect and process the education data is sound, there are concerns about the accuracy and reliability of the statistics produced. Overall the classifications, concepts and definitions for Kiribati education statistics follow internationally accepted standards, guidelines, or good practices. However the scope of the Kiribati Education Management Information System (KEMIS) dataset is not currently consistent with the needs to contribute to a sector wide system of education statistics. Source data are not regularly assessed and validated and appropriate measures are not taken to verify data sources. There are no data processes implemented to monitor errors and omissions or address data problems.

Statistical Products: The Ministry of Education aims to produce an annual education digest but the publication has been delayed for several years. Overall it was found that the periodicity of data collection generally follows dissemination standards, though the timeliness of data collection and reporting statistics does not. Published statistics are often not consistent or reconcilable over a recent periods of time, and revision studies are not undertaken on a regular basis. Dissemination media and formats are inadequate to provide the information needed by all stakeholders. Statistics are not released on a pre-announced schedule and made available to all users at the same time. Procedures concerning requests are not clearly defined and assistance to users is not monitored.

¹ A Framework for Assessing the Quality of Education Statistics. World Bank Development Data Group And UNESCO Institute for Statistics, 2004

The team made a number of recommendations that aligned with the regional project to improve the quality and availability of education statistics in the Pacific region. The goals of the project were to improve: the access and quality of education data in Kiribati; the monitoring of progress across the education sector, the usage of education statistics by national and international stakeholders:

Assess and improve the quality of education data: Capacity assessment of the roles of data management and reporting within the MoE; Improving the business processes around implementing the annual school survey including the efficiency and timeliness of the statistical digest; Training IECs on the use of tablets and survey solutions as a school-level data capture and verification tool; Updating the KEMIS user manual to include KEMIS web documentation and other data chains to improve the use of KEMIS web across the MoE; Strengthening local staff to support ICT infrastructure and creation of an IT training centre at MoE.

Improve monitoring of progress across the education sector: Improve MoE capacity in the analysis and report writing of the statistical outputs; Better management of the teacher and school leader performance data and the reporting; Train TSIMU staff in education finance statistics by supporting attendance at regional workshop for the effective reporting of education finance statistics; ECE engage with TSIMU over the data requirements to support integration of early childhood data into the MoE data system; Regulation around which body is mandated to produce education statistics as there is movement towards the reporting of sector wide statistics; Establish an inter-agency education statistics working group to coordinate the production of sector-wide statistics; Develop a national strategy for the development of educational statistics with the support of UIS/SPC.

Increase usage of education statistics by stakeholders at national and regional levels: Drive demand for the data across the MoE and education sector by engaging with stakeholders to clarify statistical education needs and how the Ministry can respond; Promote the information available for KEMIS – presenting to relevant stakeholders on KEMIS capabilities relevant to them including better use of the MoE website; Development of a school feedback form to provide topical information to schools from the digest; Create an initial information release that is published as soon as the data is verified and then publish a comprehensive statistics digest that is easy for TSIMU to produce; Targeted outputs to inform MoE staff and relevant stakeholders on school island visits (School and Island profiles); Support TSIMU to undertake a MoE level roadshow featuring the relevance of KEMIS for policy and planning; Provide training on SQL and using tables in KEMIS; Ensure data requests are kept in a register and service delivery to clients is improved.

1. Introduction

The Ministry of Education accepted a joint offer by the Secretariat of the Pacific Community (SPC) and the UNESCO Institute for Statistics (UIS) to participate in a capacity building project focusing on the improvement of education data quality in Pacific countries, a project supported by the Australian Department of Foreign Affairs and Trade (DFAT). It was then agreed that a joint UIS-SPC mission would undertake a review of the quality of Kiribati's education statistical system, expecting the resulting assessment would lead to UIS and SPC providing better support to Kiribati in the various areas where needs have been identified.

The mission took place from 26 July to 3 August 2016 with the purpose of providing a sector-wide review of quality issues in the production of education statistics in Kiribati. The mission was conceived as a collaboration between national stakeholders involved with the production of education statistics and the UNESCO Institute for Statistics and the Pacific Community. The mission team included the UIS Statistical Adviser for the Pacific States; the SPC Education Database Specialist; a SPC Monitoring and Evaluation Consultant; and a DFAT Program Officer from Canberra.

The team members met the Honourable Minister for Education; the Director of Education and the Director of Policy and Planning, Ministry of Education; the Director of Labour, Ministry of Labour and Human Resources Development; the Government Statistician and Director of Planning, Ministry of Finance and Economic Planning; the Program Manager, Department of Foreign Affairs and Trade, Australian High Commission; the Principals of Kiribati Teachers College and Kiribati Institute of Technology; the Campus Director of University of the South Pacific, and several heads of division and staff at the Ministry of Education. The team also met with the local UNICEF office and the Kiribati Pre-School Association.

The team conducted interviews using the DQAF methodology to assess the quality of education statistics by asking questions on the main dimensions of quality: pre-requisites of quality, professional ethics, methodological soundness, accuracy and reliability, serviceability, and accessibility. The responses to the questions were then recorded and analysed using a matrix template that scored the observed practices related to each dimension. Documentation of the observed practices were gathered and analysed to provide supporting evidence for the interview responses. The observations and recommendations were then synthesised and form the basis for the analysis of the findings.

The DQAF is very relevant to education reform in Kiribati as the analysis and findings complement the MOE and KEIP reform work underway. In particular it supports data quality for monitoring and evaluation of the MOE Operation Plan and the KEIP M&E framework. The recommendations also add real value in the short and medium term work of the MOE, especially as these aim to improve data integration and technology infrastructure to support better business processes in the management of education data. The recommendations will also lead to enhanced MOE and MLHRD human capacity to continue to enhance M&E for the ESSP. This will largely be achieved through enhanced technical capacity in data management and analysis for TSIMU and PPD by providing training and one on one support to staff.

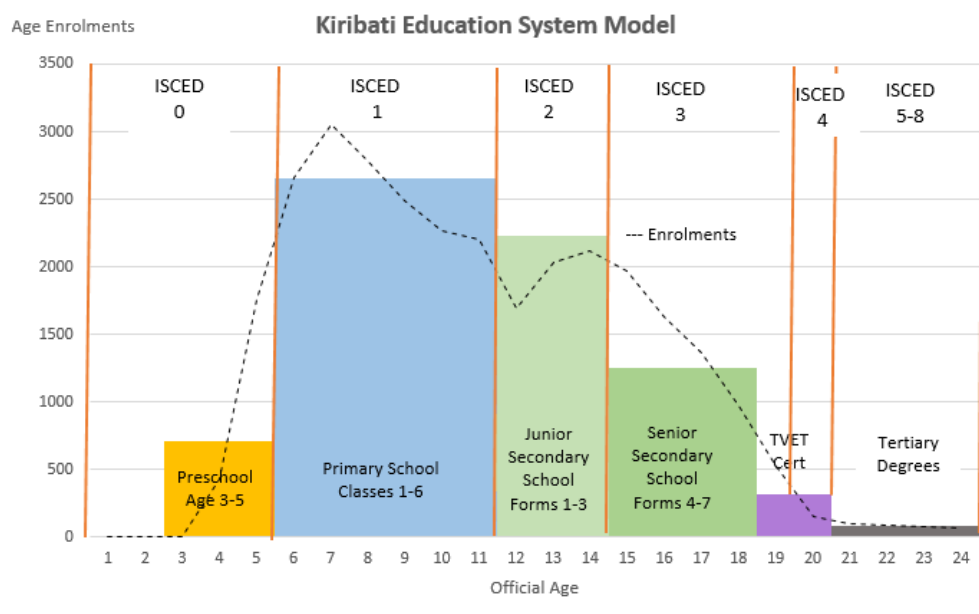
2. Overall context

Kiribati consists of 27 islands clustered in three groups of islands spread over 5.6 million square kilometres of the Pacific Ocean. The isolation of the islands and the vast distances between the three groups presents challenges to development, including difficulties of air and sea transport and telecommunications. South Tarawa is the centre of government and the hub of private sector activity. The outer islands of Kiribati largely rely on subsistence activity supplemented by cash earnings from copra and fishing. Kiribati has a population of more than 110,000 (2010) divided into four districts known as the northern, central, southern and the Linnix districts. The population is growing rapidly with half of the population under 20 years of age; consequently the education sector is under pressure to deliver quality education to all children.

a. Education sector

The Government of Kiribati defines basic education as the first 9 years of schooling and consists of primary school (Years 1-6) and junior secondary school (forms 1-3) These years of basic education are complemented by 4 years of senior secondary schoolings (form 4-7) however only primary and junior secondary education is free². Apart from formal schooling, there are also programmes in early childhood education and technical and vocational education and training. The sector covers six levels of education, namely:

- Early Childhood Education (ECE);
- Primary Schools (Classes 1-6);
- Junior Secondary Schools (Forms 1-3);
- Senior Secondary Schools (Forms 4-7)
- Technical and Vocational Education Training (TVET);
- University Education (USP)



² The government has introduced a bill to extend the fee subsidy to all secondary school students who pass their secondary exams therefore effectively making schooling free for successful students from 2017

Education is free and compulsory for children from age 6 until age 15 or until completion of Year 9. Senior secondary education (Form 4-7) is not compulsory, and is fees-free education is restricted to those students who pass a secondary entrance exam at the end of Year 9 (Junior School Certificate). There are also examinations at the end of Form 5 for the Kiribati National Certificate and Form 7 for the South Pacific Form Seven Certificate, which is a requirement for enrolment in tertiary studies.

The Minister of Education has overall responsibility of the school sector, including primary, junior secondary and senior secondary education. An amendment to the Education Act 2013 will empower the Ministry of Education to have overall responsibility for Early Childhood Education. Currently the Kiribati Pre-School Association coordinates the ECE sector, which is under the management of various non-government bodies, including churches and community groups.

The Minister of Labour and Human Resource Development (MLHRD) has overall responsibility for technical and vocational education and training. The MLHRD provides policy, planning, coordination and oversight services to the TVET sector with its mandated functions and budget. TVET and post schooling education is mostly provided by the Kiribati Teachers College, Kiribati Institute of Technology, the Marine Training College, and the Police Training Centre.

ISCED 0 Pre-School	ISCED 1 Primary School	ISCED 2 Junior Secondary School	ISCED 3 Senior Secondary School	ISCED 3-4 (National name) Technical and Vocational Education	ISCED 5-8 University
Governing body					
Kiribati Pre-School Association	Ministry of Education	Ministry of Education	MOE, Church Education Authority	Ministry of Labour and Human Resource Development	University of the South Pacific (USP)
Providers					
Churches and community groups	Government Schools	Government Schools	Government and Church Schools	KTC, KIT MTC, FTC, PTC, KNC	USP

Kiribati Institute of Technology (KIT) is the locally administered technical and vocational training institution in Kiribati. KIT's mission is to provide high quality courses and qualifications in a broad range of discipline areas for the people of Kiribati, including full and part time international certificate qualifications and short courses. KIT currently offers certificate level qualifications in the areas of Business, Accounting, Automotive Mechanical, Community Services, Electro-technology, Drainage, Carpentry, Plumbing and Construction. KIT builds additional skills into all training programs, such as enhanced spoken and written English skills and Information Technology (computing) skills.

The Australia Pacific Technical College (APTC) is an Australian Government initiative designed as a centre of training excellence for technical, vocational education and training (TVET) in the Pacific. It offers programs and Australian qualifications from Certificate III and IV level in the manufacturing and construction, tourism and hospitality, and youth and community services

industry sectors.

The University of the South Pacific (USP), is jointly owned by the governments of Kiribati and 11 other member countries: Cook Islands, Fiji, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu. Under the current structure of USP the campus in Kiribati offers foundational and first year courses in certificate, diploma and degree programmes, except for the Bachelor of Education which is offered on-site for in-service teachers. Foundational courses are also provided in three secondary schools. Typically Kiribati students complete their studies at the main USP campus in Suva, Fiji.

Kiribati Education Sector Strategic Plan

The draft Kiribati Education Sector Strategic Plan (ESSP) 2016-2019 is focused primarily on the formal school education sector. This is the area over which the Ministry of Education has primary responsibility. The Plan recognises the importance of providing a range of options for school leavers and continues the work between the Ministry of Education and the Ministry of Labour to develop integrated pathways into post-school education and training. Under the Plan, the Kiribati Teachers College will maintain its role in the preservice education of primary Kiribati teachers and the MoE will assume an increasingly important role for in-service training. Discussions will continue with tertiary education providers to provide upgrading opportunities, to at least Bachelor of Education level, for Kiribati teachers.

The Goals and Strategies of the ESSP 2016-2019 will guide the work of the Ministry for planning and delivery of quality education for each and every I-Kiribati child. The ESSP sets 9 goals:

1. Strengthen the Ministry's leadership and policy management capability
2. Develop a committed, competent and effective education work force
3. Establish the skills and capability to progress to a productive future for all students leaving the school system
4. Provide a conducive learning environment in Kiribati schools
5. Ensure Ministry support services efficiently match the needs of schools
6. Effective implementation of the Inclusive Education Policy
7. Establish an enabling legal environment for the development of the Kiribati Education Sector
8. Foster the development of early childhood education
9. Strengthen the commitment and collaboration of stakeholders vital to the delivery of ESSP goals and strategies

A major review of the ESSP key performance indicators is being undertaken to establish accurate benchmarks for targets to be set for the period to the end of 2019. These will be incorporated when ESSP 2016-2019 is reviewed at the end of 2016.

The following ESSP key performance indicators will be reviewed:

- net enrolment rate for males and females in primary education
- net intake rate (portion of new entrants into Year 1 primary) for males and females
- the survival rate for Year 5 for males and females
- the transition rate from Year 6 to Year 7 for males and females
- the proportion of teachers having the required minimum qualification to teach
- student to teacher ratio in primary education

- portion of Year 4 and Year 6 students performing at or above STAKI expected levels in Te-Kiribati, English, and numeracy
- percentage of students with disabilities enrolled in mainstream schools
- percentage of children enrolled in early childhood education programs

b. EMIS overview

There is a wide range of education related datasets that are topic-specific currently operational in the Kiribati Ministry of Education. This includes a custom developed Access database system for storing the annual school survey data, and is referred to as the Kiribati Education Management Information System (KEMIS). The KEMIS was developed in 2002 by UniQuest Pty Ltd, AusAID, and the Government of Kiribati (GoK). The purpose was to collect and compile data to establish the educational position of Kiribati under the “Education For All” initiative. Since that time, KEMIS has developed into an extensive system of data collection and data storage for use by the MoE principally to produce the Education Statistics Digest. More recently KEMIS has undergone further development to integrate other datasets, such as school assessment and examination data. The table below summarises the datasets.

Dataset and its contents	Dataset owner / responsible team	Comments
KEMIS – School Census Information System	TSIMU has the mandate of collecting data from schools and compiles the annual education statistical digest	KEMIS is a desk-top system that includes modules in Annual School Census survey forms
Teacher and School Leader performance	SIU – and entered into KEMIS	
Teacher payroll data	Ministry of Finance	Uses information from the Staff List maintained by MoE. Teacher data is x-matched with Payroll data and PSO so KEMIS holds an up-to date record of teacher information
ATLAS – Examination and Assessment data	Examination and Assessment Unit (EAU)	Developed by SPBEA and now maintained by SPC EQAP School-level data is integrated into KEMIS for reporting
Teacher professional development data	KTC but database not operational and data is being entered into KEMIS	
Finance database	Accounts Division of MoE	MoE stores finance information in a database managed by the Ministry of Finance

		Verified budget and acquittal information is uploaded into KEMIS for reporting
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c. Education statistical system

The main producers of Education statistics for Kiribati are:

- The Ministry of Education (MoE): Technology Support and Information Management Unit (TSIMU) in the Policy and Planning Division – PPD
- The Ministry of Labour and Human Resource Development (MLHRD):TVET and Employment Divisions
- The Ministry of Finance and Economic Planning: Kiribati National Statistics Office (NSO).

The MoE conducts annual censuses of primary, junior, combined schools and senior secondary schools and produces annual education statistics digests (last available 2012, with 2014 and 2015 being in draft). The MLHRD collects information from TVET providers, but statistical information is currently not available due to an inactive database, though there is some limited information available on KIT, MTC and APTC graduates. The NSO produces education related statistics from household surveys and census reports (Household Income and Expenditure survey, Demographic and Health Survey, and Population censuses), as well as in Economic reports (i.e. Government Finance Statistics).

In 2010, the MoE adopted the KEMIS school survey policy to provide a framework that will enhance and facilitate an effective, efficient, high quality and timely KEMIS data collection from schools, providing reporting to the Ministry of Education (MoE) and all stakeholders in Kiribati. The policy states:

- a) The Statistics Unit (TSIMU) should conduct a KEMIS survey at least once each calendar year.
- b) The KEMIS Survey forms shall be prepared by the Statistics Unit and despatched to schools on or well before the required time.
- c) The MoE Secretary will communicate with all schools about the need to comply with the KEMIS policy.
- d) The Statistics Unit shall provide guidelines OR assistance when needed for Principals and Responsible officers to enable them to complete the survey form.
- e) The Statistics Unit shall provide and disseminate school profiles and feedback information to schools along with survey forms.
- f) The survey forms shall be due at the MoE by the end of April each year.
- g) The Statistics Unit is authorised to follow up with schools to rectify bad quality data.
- h) The Statistics Unit will notify the MoE Executive Management of all schools not providing KEMIS survey data on time. Members of the MoE Executive will make direct contact with the non-complying schools and attempt to get accurate school data.
- i) For all schools, submission of a fully completed KEMIS survey form is an annual requirement of being a head teacher/Principal.

The KEMIS Process and Procedure manual was developed at around the same time as the KEMIS system was launched which set out the requirements for data collection and processing of the school survey, and the Principal's Handbook came into effect in 2012 which included policies related to the provision of information from schools, including the completion of the annual school survey.

The School Leadership and Management Handbook (2014) states that “the Principal should collect all necessary information - make sure it is current and accurate - store it safely in the school office; Principal must keep up-to-date and accurate records in the school files. These records and files are to be used in completing the School Returns and Reports to the IEC & MoE. Principals must ensure that all Returns and Reports are completed in full; accurate in every detail; and reach the responsible Officer/SIU by the due dates indicated in the calendar of Returns & Reports”

The general process for the data collection is that school survey forms are sent out by the Statistics Officer to school principals at the beginning of the school year and due to be completed and sent back to the Ministry by 30 April. The returned forms are entered as received in the KEMIS system and manually checked by the statistics staff for completeness. The data from the forms is entered by data entry staff into the KEMIS system. Data errors are flagged by the system to be followed up with the school supervisors (IEC/DEO). The school survey dataset is due to be fully validated and verified by 30 September. Summary tables are produced by the Statistics Officer using automated tabular outputs for inclusion in the annual Statistical Digest. Publication of the digest is scheduled prior to the start of the next years school survey. The Statistics Act 1997 empowers the Government Statistician to collect, compile, analyse, abstract and publish statistical information relating to the commercial, industrial, agricultural, social, economic and general activities and condition of the people of Kiribati; and to coordinate with departments of the Government the collection, compilation, analysis and publication of statistical records of administration.

There are a number of specific challenges that the MoE faces in collecting data from schools. These include: the remoteness and isolation of the outer islands; the lack of reliable and adequate electrical power; the difficulty in maintaining computer equipment; the low levels of IT skills amongst school leaders; the corrosive environment (coral dust and salty sea air); the lack of school furniture to safely store school records; and the poor quality/condition of school and class registers.

3. Data Quality Assessment of Education Statistics in Kiribati

a. Introduction of the Data Quality Assessment principles

The DQAF methodology was initially developed by the International Monetary Fund in 2002 to assess the quality of economic data. From 2004 onward it was modified by the World Bank and UNESCO Institute for Statistics for use in the evaluation of education data, then successfully improved and implemented by the UNESCO Institute of Statistics in other parts of the world, notably Africa and Latin America, as the basis for national initiatives aiming at improving the monitoring of education.

The underlying principles used to create the quality framework for education statistics were:

- the fundamental principles of official statistics as adopted in 2014 by the UN General Assembly³ how excellent organisations design, manage and improve processes, products and services to generate increasing value for customers and other stakeholders (EFQM)⁴;
- that identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives (ISO)⁵;
- that a desired result is achieved more efficiently when activities and related resources are managed as a process (so as to improve consistent and predictable results) (ISO)⁶;
- the international recommendations and standards (as the best proxy to most users' needs) regarding education and related statistics, mainly promoted by the UNESCO Institute for Statistics (UIS).

For the Pacific region, UIS and the main development partners are assisting Pacific countries⁷ by undertaking in-depth assessments using the DQAF methodology.

A data quality assessment mission is designed as a peer review of national practices to assess their alignment with international standards and good practices. The good practices in the list⁸ are to be viewed as guiding principles and together with the framework may be used by countries to conduct periodic self-evaluations to inform reports on the quality of education statistics sector-wide but also at sub-sector level. Many of the good practices assume that it is intended to have a documentation policy in place, based on the understanding that good quality management requires a monitoring mechanism, based on systematic documentation of arrangements, decisions, plans, implemented plans of actions, their results, etc.

As part of the mission, the team members conducted interviews with major stakeholders and examined relevant documentation available on websites or otherwise provided. The quality of the documentation provided by the education agencies is assessed and the quality of the data is tested against internationally accepted standards and definitions. The team formulates recommendations

³ [Fundamental Principles of Official Statistics](#)

⁴ European Foundation for Quality Management <http://www.efqm.org/>

⁵ International Organization for Standardization <http://www.iso.org/iso/home.htm>, Quality management principles

⁶ Ibidem

⁷ Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Palau, Papua New Guinea, Kiribati, Solomon Islands, Tokelau (Associate Member), Tonga, Tuvalu, Vanuatu.

⁸ See appendices

regarding the enabling environment, the organisation and the dissemination of the sector-wide production of official education statistics. Following on from the assessment, it is recommended that the national authorities will devise and implement a plan targeting the permanent improvement of those practices assessed as not or partially observed.

The framework is organized in a cascading structure that progresses from the abstract/general to the more concrete/specific. The first-digit level defines the six dimensions. The first-digit level is subdivided by sub-dimensions (two-digit level) and indicators (three-digit level). At the next level, practices, (numbered sequentially from 1 to 140) describe quality features that may be considered in assessing the indicator.⁹

The six dimensions as components of an overall general process.

ENABLING ENVIRONMENT	DATA PRODUCTION	DATA USE and DISSEMINATION
0. Pre-requisites of quality	2. Methodological soundness	4. Serviceability
1. Professional ethics	3. Accuracy and reliability	5. Accessibility

Each practice, chosen amongst internationally accepted statistical practices, was to be examined to determine the extent to which the practice is:

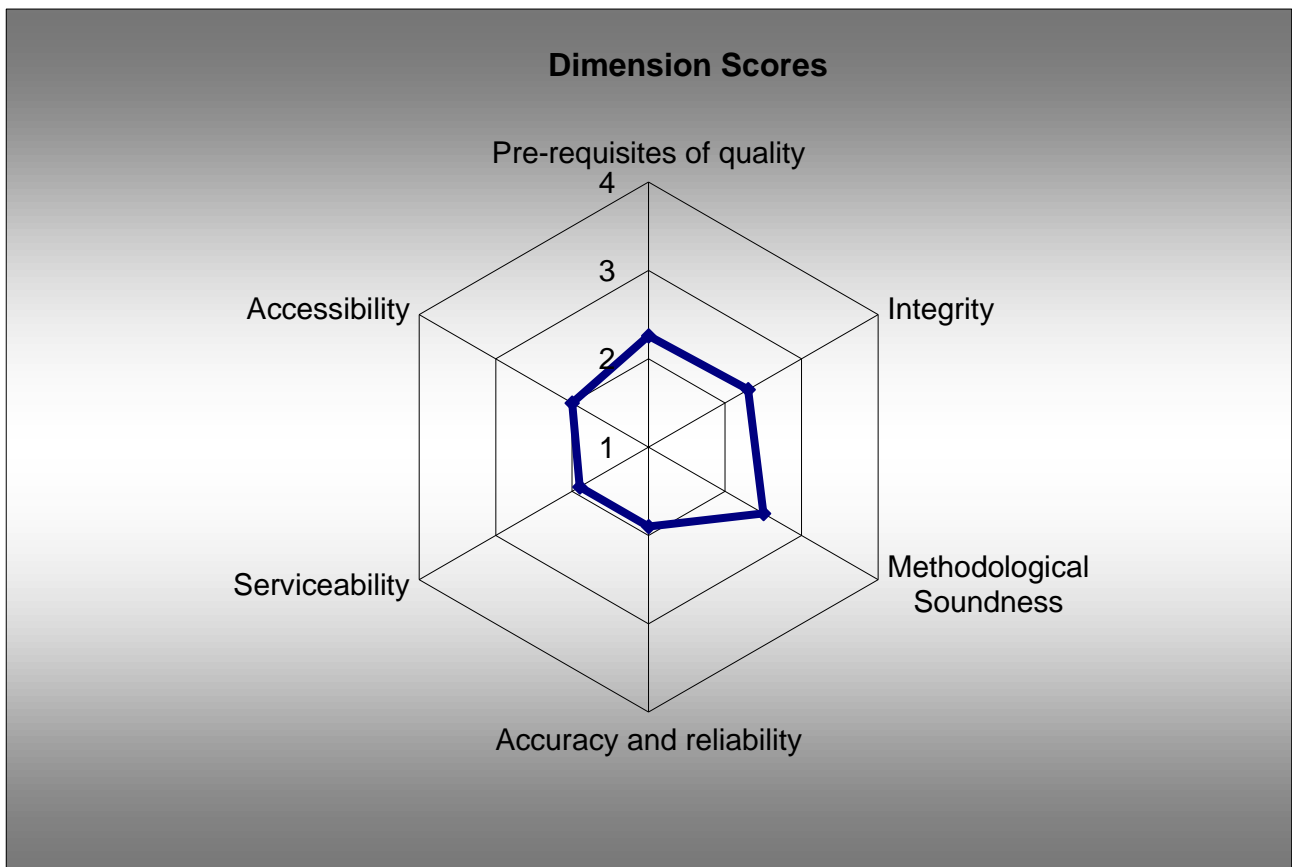
1. *not observed*
2. *largely not observed*: Significant departures and significant action has to be engaged to achieve observance
3. *practice largely observed*: Some departures, but these are not seen as sufficient to raise doubts about the ability to observe it
4. *observed*: Current practices generally in observance meet or achieve the objectives without any significant deficiencies

For each dimension, aggregation of observed evidences allows to rank the dimension observance using the same 1 to 4 scale.

⁹ See appendices

b. Summary of findings on quality of education statistics in Kiribati

The overall observance scaling of each dimension is presented in the following diagram and table:



ENABLING ENVIRONMENT	2.29
<i>Pre-requisites of quality</i>	2.26
<i>Integrity</i>	2.31
DATA PRODUCTION	2.23
<i>Methodological soundness</i>	2.54
<i>Accuracy and reliability</i>	1.91
DATA USE and DISSEMINATION	1.95
<i>Serviceability</i>	1.92
<i>Accessibility</i>	1.97
OVERALL AVERAGE	2.15

Reaching the average score of 2 overall means the good practices used in the framework are largely not observed. The weakest component is the data use and dissemination reflecting the relatively low priority given to the release of education statistics and the lack of use of data for decision-making. This is a direct consequence of the low score for accuracy and reliability which is not meeting the expected standard for the production of quality education statistics, even though certain aspects of methodological soundness have been observed. The enabling environment and in particular the human, technical and financial resources are by and large sufficient to ensure the quality of education statistics in Kiribati.

c. Enabling environment

Overall the staff resources for compiling statistics are generally adequate to perform the required tasks for producing quality statistics. However the enabling environment for is somewhat constrained by the lack of financial resources, human capacity, and legislative and regulatory mandates for the collection of sector-wide statistics. In particular, it was found that the responsibility for collecting, processing, and disseminating statistics is not clearly specified; data sharing and coordination among MOE divisions and external agencies are not adequate; there are no regular consultation meetings with data users to discuss the coverage of education statistics.

Dimension 0: Pre-requisites of quality:

Data quality is regulated by a framework of statistical laws, policies, standards and practices, and technical and human resources.

0.1 Legal and institutional environment.

The key documents regulating the production of education statistics for school sub-sector are: the School Survey Policy, the School Leadership Handbook, and the MoE's Operational Plan. The over-arching Statistics Act 1997 provides for the role of the Government Statistician in the regulation of official statistics. However the responsibility for collecting, processing, and disseminating sector-wide statistics is not clearly specified. No specific legislation or regulation states that the MoE is responsible for producing education statistics, or importantly what statistics should be produced and by whom. There is a need for formal regulation that authorises MoE to specially collect data from schools, including early childhood centres¹⁰, and report to the Minister.

The MoE has developed a school survey policy to provide a framework that will enhance and facilitate effective, efficient, high quality stakeholders in Kiribati. The policy stresses the need for timely data collection from schools to be reported to the MoE so they can accurately plan and be accountable for resources from the Government of Kiribati and donors.

As indicated in the MoE's operational plan the TSIMU unit is responsible for producing education statistics, though only on the school subsector. MLHRD is responsible for producing TVET and employment statistics though currently there are no annual statistics published. KIT, MTC and Police also produce statistics for their own reporting purposes, but MLHRD would like these

¹⁰ New legislation is being introduced in 2016 to bring the early childhood education sub-sector under the auspices of the MoE.

responsibilities complemented by TVET sector database. MFEP has the responsibility of warehousing national and sector key statistics for the National Development Plan and is also coordinating the reporting on the SDGs. The education statistics produced by MoE inform the national reporting of SDGs and also the development goals in the National Development Plan.

While specific agencies have different mandates for producing education statistics, it is important that consideration be made for the sector-wide production of education statistics coordinated by the inter-agency working group. Comprehensive statistics on the education sector will enable stakeholders to get a full picture of how the education system is operating in Kiribati.

Data sharing and coordination among MoE divisions and external agencies are not adequate. No specific MoE data sharing arrangements are in place, though there is ad-hoc sharing of data for verification purposes, such as teaching staff lists (with Finance payroll), and for requests from MoE management to plan education delivery. Formally establishing data sharing arrangements with agencies, especially with MLHRD and USP to allow for tracking of students between secondary and TVET/tertiary is important - as is the sharing of financial data from MFEP.

There is no reference to confidentiality of information on the school survey form¹¹ (for teachers) or when information is released internally or externally. There is also no statement about statistical purposes of information collected in the school survey form or explanation of how the data for education policy and planning will be used. It is recommended that a statement about statistical use of data is included in the survey form, including a confidentiality statement for use of teacher data. There is also a need to develop procedures to prevent disclosure of individual data. For example, survey forms need to be kept secure and protected from unauthorised access. It is recommended that a Data Management Policy of data protection and security be developed and implemented.

There is no specific reference in the Education Act to data collecting activities, except by regulation of the MoE. While the School Leadership Handbook states that secondary school reporting is required by school principals¹², the school survey form does not refer to the requirement for mandatory reporting. However, reporting is clearly mandatory for private schools with financial consequences noted in the covering letter. It is important that the mandatory requirement for providing a completed annual school survey is explicitly referenced on the school survey form to all schools.

There is no specific recognition of the burden placed on schools to report enrolment, teacher and other education related data. For example, in the school survey form there is no specific reference to help available to complete the survey form even though assistance is available from IECs/DEOs. There is also no specific attempt to reduce respondent burden with multiple databases collecting the same information e.g. data on secondary school enrolments needed for examinations. It is therefore important to consider data sharing arrangements and integration of databases across the sector. There should also be an in-depth review of the school survey to ensure its relevance to the operational needs of the Ministry.

0.2 Resources

¹¹ The School Survey Form as stated in the data collection document is also referred to as a Census form

¹² The School Leadership Handbook contains a section on the annual school survey stating that Principals must submit the completed form each year.

Staff resources for compiling statistics are generally adequate to perform the required tasks for producing quality statistics. Currently four permanent, one casual and one voluntary (6) TSIMU staff (3 statistics officers and 2 IT specialists) process the collected data and maintain the KEMIS system. However, despite the academic qualifications and statistical training provided to the KEMIS manager (senior Statistics Officer) and statistics officer, the analytical skills are insufficient to be sustainable without additional technical assistance. In particular, further technical training in data tabulation and extraction would be needed to enable the production of quality education statistics. There was limited evidence of successive planning and professional development planning for TSIMU staff. Human resource planning should ensure technical capacity is retained within TSIMU unit to support the continuing development of KEMIS. The availability of IT expertise is particularly important given the increased use of technology in TSIMU and in schools.

Overall the office equipment for compiling statistics are adequate to perform required tasks. In particular there is a good computing environment with file server and computer workstations, and a website though this is not fully exploited to disseminate statistical data. The KEMIS software is working well and has been recently updated, including development of a web access portal. There is adequate data protection through backup systems. There is sufficient physical facilities, except for regular power cuts and the office does need maintaining against dust, damp and rodents. The MoE operational plan has a planned but unfunded activity to upgrade facilities – including IT training facilities.

Financial resources for compiling statistics are inadequate to perform all the required tasks to process the school survey data. While current funding is sufficient for collecting and compiling data, there is a critical need for more funding to support data quality assessment, especially data auditing activities. Some of the Ministry's activities are funded by a range of donors; extra-budgetary support is provided for the KEMIS development, though this is not based on identified statistical needs. Better targeting of funding to improve data validation and verification activities would have the greatest impact on the production of quality education statistics.

In some areas measures have been implemented to ensure the efficient use of resources. In particular, the strengthening of the data gathering function of KEMIS is designed to strengthen evidence based policy development and decision-making and supports improved procedures for monitoring the implementation of the ESSP and Ministry operational plans. Staff are provided with regular professional development, though additional training in data analysis and report writing is needed. This includes data management, analysis, and using evidence for policy and reporting needs. There have been a number of reviews of the KEMIS system (2010, 2014, 2015) and a M&E review is planned for 2016.

0.3 Coverage of education statistics.

There are no regular consultation meetings with data users to discuss the coverage of education statistics, although ad hoc consultation with key stakeholders does take place; for example consultation with Directors and School Improvement Unit on the content of the education statistics digest. The planning and implementation of a data user consultation process is an important feature of a functional statistical system that ensures the relevancy of education statistics to key stakeholders. Although there is no regular data user consultation process, there has been infrequent meetings of the IT working group. While review processes are established there is no adequate

process for reviewing the annual school survey. There is a recognised need to establish a sector-wide data user working group which meets regularly to discuss the scope, coverage and quality of education statistics.

0.4 Statistical quality

There is a perception in the MoE that the quality of education statistics needs to improve, especially in regard to the timeliness and completeness of the data. In particular, the PPD expressed concern about the credibility of published statistics and that they could not rely on currently available data. For example, management were concerned about the high number of secondary enrolments reported in KEMIS. Other government ministries and development agencies also indicated concern about the quality of education statistics, including MFEP, NSO, DFAT, and KEIP. Currently no external audits on school survey data are conducted, except through partner initiatives. However, the draft 2016-2019 Kiribati Education Strategic Plan indicates that DEOs and IECs may have a role in the quality assurance of school record management and the survey data provided by schools to the MoE. SPC is assisting the MoE to develop tools to assess and triangulate student enrolments with past data.

The TSIMU has responsibility for monitoring the quality of the collection, processing, and dissemination of education statistics. There has been four major reviews of the data production chain in 2010, 2012, 2014, and 2016 but the action plans and recommendations have yet to be fully implemented. This is in part due to the lack of technical capacity to implement the recommendations without external technical assistance. It is important for the TSIMU to plan and implement recommendations as part of the Division Operational Plan activities. The focus of planned activities should be on improving the statistical quality of existing data collection rather than on developing new sources of information for education statistics.

While response rates and dates of receipt of survey forms are available from the KEMIS system there is no active follow-up to ensure all schools complete the survey before publication. However, once received the TSIMU does request schools which have returned incorrect or incomplete data to validate against their records. It is recommended that the unit implement school survey monitoring processes to ensure quality of education data, including additional validations such as checks of total rolls with the previous year.

Dimension 1: Professional ethics

The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.

1.1 Principles of statistical policies and practices

The terms and conditions under which statistics are produced do not explicitly guarantee the professional independence of the TSIMU as a data producing agency. While official statistics are produced under the Statistics Act, there is no explicit reference to this in statistical publications. MoE may wish to consider drafting an education regulation to promote the independence of education statistics, including the requirement to produce an advance release schedule.

Professional development is actively promoted and supported within TSIMU. For example, basic statistics and data analysis training has been provided by SPC/UIS and the KEIP Data Management

Advisor (jointly with SPC), though there is a need for more extensive and additional advanced data analysis and interpretation training. There has been few promotional activities of education statistics within the Ministry and at the national level; it is suggested internal and external road shows be provided to key stakeholder and that a brochure be developed for schools and communities about the importance of education statistics.

The selection of data sources and statistical techniques are not informed solely by statistical considerations as data is also collected for operational management of education sector. However, there is some evidence of statistical techniques for validation and verification but survey forms could be better aligned to statistical considerations, especially in regard to teacher data. For example, the design of the form for teacher data could be improved to allow more space for recording individual teacher information.

As the data producing agency, the MoE has the responsibility to comment when its statistics are misinterpreted or misused. However there is no evidence of public commentary on results or on providing briefings to media. Nonetheless there are sector consultations on education statistics. For example, the MoE holds consultations with school communities about education data and PPD had extensive discussions over the education statistics with MFEP in preparation for the Kiribati National Development Plan and monitoring framework. Examination results are also discussed at community consultations, on the radio and through the print media.

1.2 Transparency of statistical policies and practices

The terms and conditions under which statistics are collected, processed, and disseminated are not developed and therefore not readily available to the public. However during consultations school communities are made aware of the approval processes for publication of education statistics.

To assist data users, there is a need to develop terms and conditions for use of education statistics. The conditions should include reference to internal governmental access to statistics prior to their release and to the approval processes for publication of education statistics.

To ensure ownership of the statistical information, the products of statistical units should be clearly identified. The Education Statistics Digest is identified as MoE's Statistics Unit publication. However other statistical products such as the School Feedback Report are not specially identified as an official publication; the school information needs to include MoE insignia.

There is limited consultation and notice provided to schools for major changes in methodology, such as changes in the school survey forms and statistical requirements for examination and assessment results.

1.3 Ethical standards

Apart from the Kiribati National Conditions of Service and the Teacher Code of Conduct there is no clear set of ethical standards for public service staff working with statistical data. Staff need to be made aware of the ethical standards required when working with personal and statistical data and should have basic knowledge of the UN Principles of Official Statistics¹³.

¹³ SPC includes the UN Principles of Official Statistics in the Data Analysis and Report Writing course which is delivered on request to Pacific Islands Countries and Territories in association with national statistical offices.

d. Data production

While the methodology used to collect and process the education data is sound, there are concerns about the accuracy and reliability of the statistics produced. Overall the classifications, concepts and definitions for Kiribati education statistics follow internationally accepted standards, guidelines, or good practices. However, the scope of the Kiribati Education Management Information System (KEMIS) dataset is not currently consistent with the needs to contribute to a sector wide system of education statistics. Source data are not regularly assessed and validated and appropriate measures are not taken to verify data sources. There are no data processes implemented to monitor errors and omissions or address data problems.

Dimension 2: Methodological soundness

The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.

2.1 Statistical concepts and definitions

Overall the concepts and definitions for Kiribati education statistics follow internationally accepted standards, guidelines, or good practices. For example, the KEMIS User Guide explicitly uses international UIS technical guidelines for definitions of education indicators. However, since the KEMIS user guide is a very large document (600-pages) it is not very often used or read by the TSIMU EMIS team. There also exists a table of specifications which documents education data definitions, data formats, and layouts, which doesn't seem to be used in practice. Some national concepts are detailed in the Principal's Handbook but in general the documentation on business processes for schools is lacking in the Handbook.

The EMIS concepts and definitions (data fields, indicators, metadata, etc.) are clearly documented in a user guide and data values are documented. The data extraction using Pivot Table Analysis workbooks is labour intensive and requires substantial institutional know how which is not well detailed and documented. However, as there are no procedures developed for conducting a data audit, there are no internal or external audits to validate the quality of data collected from schools.

While there is some data integration within the MoE, there are many other data sources outside KEMIS which are not connected or uploaded to the database. This includes: teachers payroll, teacher and school leader performance data, teacher and school leader professional development data; curriculum resources and inventory stocktake data and the quality assessment of school facilities. It is therefore difficult to do comparable analysis on EMIS data and national datasets. The lack of a student ID unique identifier is a major barrier to linking with external datasets and integrating disparate datasets.

2.2 Scope of education statistics

The scope of the KEMIS dataset is not currently consistent with the need to contribute to a sector wide system of education statistics. The Ministry has legislation being tabled in Cabinet for inclusion of ECE in their data collection processes and this could take place from 2017. TVET and Higher Education are not mandated within the Ministry of Education and therefore KEMIS does not

store data on these sub-sectors. MLHRD are in the process of developing a database for the TVET sub-sector and the MOE has identified in their ESSP 2016-19 that it will work with MLHRD to link school leaver data with TVET and employment pathways. There is also a need to promote tracer surveys for TVET graduates. Consequently there is a need for regular meetings between the two ministries to ensure effective coordination and planning of the integration of datasets.

Data in several divisions of the Ministry is collected in silos and some duplication of data collection/redundancy exists. Data on teacher and student attendance is collected by the School Information Unit but teacher attendance data is separately being compiled by UNICEF. The School Information Unit collects class lists for each term, but these data are not currently stored together in KEMIS or reconciled. Also there was some evidence that data on the quality of school facilities was stored separately and not linked or compared with KEMIS data recorded from School Census.

2.3 Statistical classification and sectorization systems

In general the classification of statistics complies with internationally accepted standards, guidelines, or good practices. The education statistics can be disaggregated by island, island group, urban-rural location, district, by government and church schools, and at the national level. Data collected in Kiribati uses a national classification levels have been mapped to ISCED2011. However there is a need to train the EMIS team and TVET staff at MLHRD on the standard UIS concepts and definitions.

2.4 Data recording practices

Overall education statistics for student enrolments and graduates are recorded according to internationally accepted standards, guidelines, or good practices.

For example, student age is recorded based on a sighted birth certificate. That is, when students enrol they are required to bring a birth certificate, although in reality this does not always occur¹⁴. The birth certificate is also required for sitting of the three national examinations. For the annual school survey the census day time reference period has changed from March to April and is used for calculation of student ages. However, evidence suggests that most teachers use the date of completing the school census to work out enrolment numbers and not the correct as at date. This under-estimates enrolments by 3-5 percent due to in-term drop-outs (or transfers).

Graduates' data are available from the Examinations Unit and are attributed to the school year in which the students are enrolled. The data includes the number of students successfully completing Junior School Certificate (JSC), the Kiribati National Certificate (KNC) and the South Pacific Form 7 Certificate (SPFSC).

Schools provide information on their finances in the annual school survey, including funds raised and expenditures though it's not clear for what period. The MoE expenditure data refers to actual annual expenditure but only for teacher salary costs. It appears that education finance data (e.g. recurrent budget and actual expenditures and by level of education) can be collected on the

¹⁴ A recent study found that around 10% of birth certificates were sighted when student enrolled and dates of birth recorded.

teachers' salary costs to the Ministry. There is a need to strengthen communication with the Finance Division on the sharing of education data. It is recommended that a representative of the Finance Division be a member to the working group on education statistics.

Dimension 3: Accuracy and reliability

This dimension of quality is based on the principle that data produced give an adequate picture of the reality of the education sector.

3.1 Source data

Statistics on enrolment and education resources are collected through a regular administrative school survey. The school survey is conducted once per year in April though there is no specific reference date for the census. The survey collects a whole range of data for key statistics (e.g. school enrolment, teachers by teaching qualification, number of dropouts, repeaters, students with disability, and data on school resources and facilities). Student assessment data are obtained from the Examinations and Assessment Unit on the KNC and JSC examinations and STAKI assessment results by school and are imported in to the KEMIS database for reporting.

Coverage is comprehensive in terms of geographic areas covering all islands and island groups in Kiribati. The EMIS datasets can be presented by geographical area by island, island group and national level. Student enrolment and teacher data can be disaggregated by gender, age and aggregated by education level, private or government, rural and urban, trained and untrained teachers, and breakdowns of types of disabilities are available¹⁵. The new EduPoint system at KIT includes a similar range of demographic and geographic information, with lecturer information and their qualifications being held in a different Excel database

KEMIS has unique school numbers and duplication of schools does not occur. The STAKI Identifiers have been problematic in the past, not using KEMIS coding, but this has been resolved. KIT has not been using unique numbering recently due to having to use class lists for 3-4 years, and there have been considerable difficulties with the matching of names and verification of data. The new EduPoint system uses a system generated unique number that is not traceable to or from the KEMIS¹⁶.

Analysis of age and potential age misreporting in data collection has been identified as an issue in EMIS returns from schools and also in the previous population censuses 2005, 2010 and more recently 2015. Increased efforts need to be undertaken to ensuring complete data or DOB and to verify student dates of birth including against birth certificates where possible.

School level statistics on expenditures are collected in the school survey for all sources of funds, types of expenditure and by level of education. At government level the budget and expenditure reporting are managed by the MFEP. MOE's reconciliation is reported back from Finance monthly.

¹⁵ The disability questions in the school survey need updating to use Washington Group approach for better data accuracy and alignment with the national population census.

¹⁶ Note: Birth Registration Number and Washington Group approach to classifying disabilities should be used.

This process is slow and does not support unit managers to execute their budgets in a timely way. A new system is being installed that will allow 'real-time' reconciliation within MOE.

Apart from school finances it is difficult to confirm funding from non-government sources. However, the Household Income and Expenditure Survey data is available from the National Statistics Office but is not currently used for education policy purposes. In 2015 MOE-KEIP undertook a Household survey of 550 households that included household-level expenditure (which can be factored by the number of children in types of education) on education including for private school expenditure and for schools' operational funding.

The fee expenditure per student is available for TVET institutions, and the 2013 MTC Economic Analysis (MFAT website) and KIT Graduate Destination Survey provides an analysis of the income and expenditure of a representative sample of students, and comprehensive TVET financing information is available through a 2014 DFAT report (public report). Basic education international financing information is available on the 2015 Education Sector Analysis (report available but not published). Information on NGO ECE education funding by the community and church-based groups is not currently available.

There is a regular programme of assessment of student achievement in literacy and numeracy at year 4, 6 and 8 (as well as the 3 national exams), and an Early Grade Reading Assessment (EGRA) is being completed for the first time in 2016 (literacy) and 2018 (numeracy). All statistics on the assessment of student achievement are stored in the KEMIS at the school-level.

KEMIS data for levels of enrolment are not consistent with other data sources such as attendance rates in household surveys and the population census where fewer students are reported as attending school¹⁷. Source data is available in confidential files and class lists at KIT and MTC.

Estimates for school age populations are reasonably up-to-date. Population data is supplied by the NSO using population census data; population estimates by single year of age and gender are provided but the accuracy of data has been questioned. KEMIS data is available by age but inconsistent practices of classifying age and not recording DOB details mean this information is not as accurate as it needs to be.

The KEMIS system records the receipt of completed school survey forms. The front page of existing school survey questionnaire states the deadlines for returning forms to the Ministry of Education on or before April 30th 2016. Follow-up with schools is now the responsibility of TSIMU for South and North Tarawa schools and for IECs to follow up with receipt of data and non-responsive schools in the outer islands. More active and timely follow-up actions would help to reduce publishing lead-times and allow for more data verification.

3.2 Assessment of source data

Source data are not regularly assessed and validated. There is no process to validate or audit school data in place and no guidelines have been made available for the EMIS team. The KEMIS manual does however provide some instructions for use of a XY Scatter Plot to interrogate the data values

¹⁷ – The annual school survey consistently reports higher numbers of students enrolled in schools than the population estimates for school-age children. There is evidence that this is a result of an undercount of population at the time of the census.

and variability against previous school returns for outliers. Examination data is appropriately audited through practices that are consistent with EQAP requirements. Due to the lack of resources teacher and school leader performance data is not audited nor verified. TVET data is routinely audited through auspice partnerships.

Response rates for basic education are easily identified and reported but the practice is largely not observed. For missing schools an estimate using previous school year data is obtained. No imputation is made but a previous school year data record is used for missing data for non-responding schools but not for missing classes causing varying error rates between years (e.g. 4.7% in 2013). The inclusion of data limitation information was not observed for TVET information.

Appropriate measures are not taken to validate data sources though this is now covered by IEC responsibilities and should be implemented from 2017. No training has been conducted on data audits and data validation practices are limited and not sufficiently implemented. TVET data is verified against paper files and is a requirement of auspice arrangements. A data validation technique using a scatter plot is used to identify outliers from data by comparing data to previous years. This technique is done after all school data has been entered and identifies potential errors in data collected from schools, such as large differences in enrolment or teacher numbers allowing for limited or no time for further school follow-up. However, there is a need for a more systematic approach to data verification prior to the publication of data.

Follow up occurs to some extent with schools on a visual scan of the survey when returned but this does not appear vigorous. KIT undertakes comparisons at the time of reporting and data is adjusted where needed; however, database problems have restricted the accuracy of historic comparisons and trends.

A subset of student data from the School Improvement Unit and Examinations and Assessment Unit could be compared for data consistency in the KEMIS returns. The application of these processes in basic education is not sufficient to ensure errors and omissions are mitigated and/or explained. Practices have not been consistently implemented (e.g. address missing class information) cause anomalies that are not explained when publishing.

While the use of school registers is promoted as a source of information for the school survey, the accuracy of school and class registers is not regularly assessed for validity and reliability. However, evidence suggests that school record keeping and class registers seem to align well with the data reported in the annual school census and school information reports. School registration and record keeping varies and could be further improved in support of more accurate data. Almost all school record keeping is paper based and local conditions mean historic paper records do not often survive. Schools are also not in a position to retain copies of historic administrative records.

Verification of the class registers are the responsibilities of the school leaders, with auditing by IECs and DEOs in basic education and Deputy Principals at KIT. However there is no evidence of this occurring. Transfers of students are routinely recorded but teachers and schools are not always informed by parents. There is no verification or tracking of student transfers.

Systems are in-place to report non-enrolment and attendance, and school and community members are tasked with ensuring the whereabouts of missing children are determined. All schools are registered and held in MOE files and noted in KEMIS but this is not the case for ECE nor the

School for Children with Special Needs. KEMIS records all responding or non-responding schools. Public and private school are clearly defined in the EMIS datasets.

3.3 Statistical techniques

There are no data processes made available to help the EMIS team to monitor errors and omissions or address data problems. However, a scatter plot tool has been developed though it is not used to identify schools with data issues. The data collection instruments are reasonably easy to complete by the school leader but there is insufficient explanation or definitions provided for some data and there is evidence that some school leaders don't fully understand what is required and why. The revised survey instrument using an electronic PDF has not been effectively piloted as planned in 2015; and has not continued to be used in the most current year.

Missing school returns is treated by estimating the enrolment numbers based on previous years data. However, the application of techniques to manage missing class information has not been routinely applied and this has caused inaccurate data reporting and affected trend data. The application of the business process is not sufficient to ensure data accuracy. For KIT the reliability of enrolment and completion data is dependent on the reporting by Heads of Department to the Academic Committee. However, the lack of a reliable data storage system has caused some inaccuracies in the recording of student data.

Other statistical procedures employ sound statistical techniques. Indicators are compiled based on UIS definitions for basic education with definitions for KIT being most commonly aligned to that of partnering Colleges of Technical and Further Education (TAFE). However MLHRD requires capacity building on how to better apply statistical methods to the collection and processing of TVET data.

3.4 Revisions of education statistics

Revision studies are not undertaken systematically except during the compilation of the Education Statistics Digest. Revisions are generally dependent on the extent of TA involvement and coverage is somewhat limited. KIT reporting is subsumed into TVET Sector Support Program reporting and led by a Team Leader and Managing Service Contractor, with KIT staff only providing source data. TAs contracted by the MSC undertake periodic revisions at the time of reporting

Preliminary versions of the digest are assessed for accuracy and a draft report is sent for consultation with key TAs and a small range of MOE staff, prior to PPD and then Secretary sign-off. However, the depth of assessment cannot be assured since no systematic audits are undertaken.

Updated methodologies are incorporated into workbooks for KEMIS; however, known errors or repeat offenders are only occasionally recorded or flagged for more in depth intervention. While procedures are well documented they were not observed as being implemented during the data analysis process.

The Education Statistics Digest was not published between 2012 and 2014 and the 2015 digest is currently being drafted. No distribution of School Feedback Reports have been observed. While *ad hoc* reports appear to be generally met, stakeholders have said that there can be delays in getting data and limited help is provided and the information is not received in a form that empowers them to action the information.

3.5 Archiving of source data and statistical results.

The KEMIS database is structured according to relational standards. KEMIS holds data in SQL Server and locally on a Desktop Access runtime application. Nomenclatures are systematically used but not by all of the MoE. Nomenclatures are specified in the Principal's Handbook and other documentation, but their use is largely confined to the TSMIU unit.

Documentation does exist for most MoE data collection systems, but it is not stored in a common repository and not often referred to or utilised properly. While the business processes are defined and documented they are overly detailed and not very user friendly. The name of the list of values tables are not standardised and naming of variables is not harmonized.

e. Data use and dissemination

The Ministry of Education aims to produce an annual education digest but the publication has been delayed for several years. Overall it was found that the periodicity of data collection generally follows dissemination standards, though the timeliness of data collection and reporting statistics does not. Published statistics are often not consistent or reconcilable over a recent periods of time, and revision studies are not undertaken on a regular basis. Dissemination media and formats are inadequate to provide the information needed by all stakeholders. Statistics are not released on a pre-announced schedule and made available to all users at the same time. Procedures concerning requests are not clearly defined and assistance to users is not monitored.

Dimension 4: Serviceability

Statistics with adequate periodicity and timeliness are consistent.

4.1 Periodicity and timeliness

The periodicity generally follows dissemination standards with an annual school survey form sent out to school principals to collect statistics from all primary, junior, combined and secondary schools. However, as observed, certain schools have failed to receive their survey - despite reminders for this to be followed up.

Learning achievement surveys are regularly conducted according to a periodicity responding to the national monitoring needs. The STAKI assessment of literacy and numeracy of Year 4 and 6 students are conducted annually including year 8 from 2015 and results are included in the annual education statistical digest. Separate national report is also produced by MOE detailing STAKI results, and ECAP provides a PILNA national report. Examples of students' work and progress is intended to be stored in Student Portfolios and progress reported in school term reports. Unfortunately portfolios are not held (as intended) for most students and progress is only sporadically reported in termly school reports and is not useful for monitoring purposes.

Education finance statistics are not published annually. Very little information is published on education finance statistics. Some finance statistics were outlined in the 2012 digest but none were reported in the 2014 digest. This is despite KEMIS holding the annual school income and expenditure data, and the Ministry of Finance national budget and expenditure data. It is recommended that the annual digest has a section that reports on education finances. This will

require increased communication with the MFEP, and greater exposure of education finances across the MoE.

Timeliness does not follow dissemination within the agreed business process and internationally acceptable standards. It is taking around 18 months before drafting and then publication often doesn't occur (i.e. 2013, 2014 and 2015). Financial statistics are not being disseminated within the internationally acceptable timeframe. It is recommended that, as required under the KEMIS processes and procedures, an initial information release is published as soon as the data is verified followed by simpler and more automated digest that requires less external TA for publication.

4.2 Consistency of released statistics

Published statistics are often not consistent or reconcilable over a period of time. While processes exist for quality assuring the aggregates of education data, it happens more on an ad-hoc basis. KEMIS is able to produce time series data, however it is not clear from the digests, as the type of data included in the digests may change over time and recent digests are often not publicly available. Unpublished data shows major inconsistencies in student enrolment totals between 2013 and 2016. Some information can be reconciled with data from other sources within the MoE: such as, the school term reports collected by the School Improvement Unit and data collected by the Facilities Management Unit. However, this processes is not institutionalised, documented nor resourced.

Dimension 5: Accessibility

This dimension is based on the principle that data and metadata should be presented in a clear and understandable way and should be easily available to users.

5.1 Presentation of education statistics

There is evidence from the annual education statistics digests that data are presented in a way that facilitates interpretation and meaningful comparisons. This is especially true for the 2014 digest which has more comprehensive analysis compared to the limited analysis presented in the 2012 digest. However, preparation required enormous TA input and by the time the draft was finalised the analysis was no longer current and rarely flowed on to targeted action. While additional data can be obtained from KEMIS, it is not routinely made available. It is suggested that the MoE produce an annual statistics report targeted at stakeholders with key data trends highlighted. The report format should be developed in consultation with key stakeholders.

Dissemination media and formats are inadequate to provide the information needed by all stakeholders, including government agencies, schools and universities/TVET providers, and community organisations. Only the digest is published (periodically); there is no information release prior to the annual digest. The MoE has created online access to the KEMIS, but access requires a password and access is patchy. The website is not up to date and little data is currently published via this mechanism. The latest version of the digest available on the MoE website is for 2012 – some three years out of date.

Statistics are not released on a pre-announced schedule and made available to all users at the same time or when required. While there is a schedule for the returning of surveys, the release date of the digest is not mentioned in the survey. The TSIMU DOP routinely commits to the Digest being

reported before the end of June but this has never occurred. The digest is not disseminated to all interested users (e.g. Schools). The digest is published on the MoE website, however no information campaign is undertaken to inform the public and encourage them to access the online digest. The KEMIS business process states that TSIMU must publicly announce the dates of the initial information release and the more detailed digest. These dates should be included in the survey as well as on the MoE website.

While statistics not routinely disseminated are available upon request, there is no evidence that requests for information are being met as there is no logging of requests. KEMIS has the functionality to do this and requests occur occasionally, especially during parliamentary sitting times. However, sometimes the requests require data the KEMIS is unable to produce.

TVET data on graduates are also used in labour mobility plans as the basis of marketing I-Kiribati skilled supply. However the education statistics digest does not report on the TVET sector. There is limited statistical information on TVET institutions produced by either MLHRD or MoE.

5.2 Meta-data

The metadata for the statistical data provides users with an adequate information about what the data mean and about the methodology used to collect and process them. Metadata (for example, definitions, concepts and methodology) are prepared and included in the digest. Metadata available is disseminated in the digests and on KEMIS online. Response rates are noted in the digest. Issues with population data and enrolments are explained in the 2014 digest.

5.3 Assistance to data users

Procedures concerning requests are not clearly defined and assistance to users is not recorded and monitored for performance, accuracy and consistency. No name or contact details are provided on the digest. However, a phone number is provided on the MoE website (but no name). Suggest to include contact information (name, phone, email) on school survey and digest of TSIMU team and the types of assistance available. Greater awareness of assistance that can be provided by the team needs to be developed across the MoE, other ministries and stakeholders.

Assistance to users is noted, but not documented in a format that can be referred back to. There is no formal policy in place around schedules for data requests. Demand for data needs to be built first. Need to maintain a document that records data requests including who from, type of request, was the request answered, if not then how was it followed up.

4. Recommendations and proposed list of activities

The recommendations in this section were developed based on the issues identified in the DQAF findings. The proposed list of activities aim to improve the quality of education statistics in Kiribati by strengthening the regulatory environment and human resource capacity, the data production chain, and the use and dissemination of education data and statistics.

1. Enabling Environment:

- 1.1 Regulation for an organisational body mandated to produce sector-wide education statistics
- 1.2 Establish an inter-agency education statistics working group to coordinate the production of sector-wide statistics
- 1.3 Develop a national strategy for the development of educational statistics
- 1.4 Better management of the teacher and school leader performance data and reporting
- 1.5 Train TSIMU staff in education finance statistics by supporting attendance at regional workshop for the effective reporting of education finance statistics
- 1.6 TSIMU engage with ECE over the data requirements to support integration of early childhood data into the MoE data system

2. Data Production:

- 2.1 Build MoE capacity in data management and reporting of KEMIS data
- 2.2 Improve the business processes around implementing the annual school survey including the efficiency and timeliness of the statistical digest
- 2.3 Train IECs on the use of tablets and survey solutions as a school-level data capture and verification tool
- 2.4 Updating the KEMIS user manual to include KEMIS web documentation and other data chains to improve the use of KEMIS web across the MoE
- 2.5 Strengthening local staff to support ICT infrastructure and creation of an IT training centre at MoE to train staff in the use of IT applications.
- 2.6 Investigate linkages between birth certificates (civil registry) and student data
- 2.7 Discussion paper on the possibility of moving towards a student unit level database to enable more disaggregated statistics, including the development of a database for the senior secondary student level data
- 2.8 Improve MoE and MLHRD capacity in the analysis and report writing of the statistical outputs

3 Data Use and Dissemination

- 3.1 Drive demand for the data across the MoE and education sector by engaging with stakeholders to clarify statistical education needs and how the Ministry can respond
- 3.2 Promote the information available for KEMIS – presenting to relevant stakeholders on KEMIS capabilities relevant to them including better use of the MoE website
- 3.3 Development of a school feedback form to provide topical information to schools from the digest
- 3.4 Create an initial information release that is published as soon as the data is verified and then publish a comprehensive statistics digest that is easy for TSIMU to produce
- 3.5 Targeted outputs to inform MoE staff and relevant stakeholders on school island visits
- 3.6 Support TSIMU to undertake a MoE level roadshow featuring the relevance of KEMIS for policy and planning
- 3.7 Provide training on IT applications, including SQL and using tables in KEMIS and using Tableau software for data visualisations
- 3.8 Ensure data requests are kept in a register and service delivery to clients is improved.

5. Conclusion on the way forward

Structural, systemic and sustainable improvements generally require high level decisions; this is why UIS strongly recommends that a National Strategy for the Development of Education Statistics is discussed, proposed and formally adopted as an Education sector wide initiative.

As the sector-wide approach in Kiribati affects the mandates of the Ministry of Education and Ministry of Labour and Human Resource Development, and requires the support of the National Statistics Office and Ministry of Finance and Economic Planning, the recommendation needs to be considered at the Ministerial level and presented to Cabinet for decision.

The UIS recommends that it is proceeded by stages with reporting endorsed by the relevant decision making level. For Kiribati, this would involve the participation of all sub-sectors in the formation of an education statistics strategy. That is, the key sector stakeholders in early childhood education, primary and secondary education, TVET and tertiary would need to agree to work together to formulate a sector-wide national strategy.

As a pre-requisite, a proposed work-plan document showing the way forward would need to be agreed, i.e. what is expected, the ways and means to draft, adopt and disseminate the final strategy document. The recommended successive stages are the following:

1. A DQAF assessment report outlining the major strengths and weaknesses of the national education statistics systems with recommendations to improve the business processes of data collection, processing, analysis and reporting (this report).
2. A NSDES strategy report which identifies the strategic goals in terms of statistical information to be delivered over the coming years and of the capacities needed for that purpose.

3. A multi-annual plan implementing the NSDES strategy together with the relevant mechanisms to monitor and report to national authorities, partners and stakeholders.

In the Kiribati context the preparation of the NSDES and the associated work-plan requires the formation of a sector-wide taskforce composed of senior staff who can advise on the policy and technical issues associated with the development of a sector-wide education statistics strategy.

Jointly UIS and SPC have committed themselves to support the initial work-plan approved by the Ministry of Education following the fact-finding mission. UIS and SPC are also prepared to assist with other partners in the design process facilitating the smooth progress of each stage and the overall process. UIS can provide advice on the Education data conceptual framework, methodologies and good practices for data production and analysis, international reporting, including SDGs; SPC can share expertise on EMIS good practices and new technologies in the Pacific environment, on reporting to regional organisations, on interrelations between Education sector statistics and the National statistical system and links between national strategies and the ongoing Pacific Statistics Strategy 2011–2020.

5. ANNEXES

Kiribati DQAF Dimension and Sub-dimension Scores

Legal and institutional environment	1.81
Resources	3.28
Relevance	1.50
Quality awareness	2.44
Pre-requisites of quality	2.26

Professionalism	2.58
Transparency	2.25
Ethical standard	2.08
Integrity	2.31

Concepts and definitions	1.25
Scope	2.67
Classification/sectorization	3.25
Basis for recording	3.00
Methodological soundness	2.54

Source data available	2.23
Assessment of source data	1.90
Statistical techniques	2.00
Revision studies	1.25
Archiving of source data	2.17
Accuracy and reliability	1.91

Periodicity and timeliness	1.67
Consistency	2.17
Serviceability	1.92

Data accessibility	2.67
Metadata accessibility	2.25
Assistance with the users	1.00
Accessibility	1.97

Reporting requirements in Kiribati

a. National

Kiribati Development Plan 2016-2019

KDP 1: Human Resource Development

Key Objective: Improve the quality of education and training to provide students with the skills and capability to progress to a productive future by 2019

Key Performance Indicators:

1. The target for net enrolment rate for males and females in primary education is 100%.
2. The target for the Net Intake Rate (proportion of new entrants into class one primary) is 100% for males and females
3. The target for the Survival Rate for Class 5 is 100% for males and females
4. The target for the Transition Rate from Class 6 to Form 1 is 100% for males and females
5. The proportion of teachers having the required minimum qualification to teach is raised to 100%
6. Student teacher ratios in primary education to be reduced to 20.
7. Proportion of students performing at or above the STAKI expected level is raised to 60% in English, 70% in Te-Kiribati and 60% in Numeracy for Class 4 students and 60% in English, Te-Kiribati and Numeracy for Class 6 students.
8. 50% of students with disability enrolled in mainstream schools
9. 50% of students enrolled in Early Childhood Education
10. An increased number and proportion of KIT students complete their training and gain international quality assured qualifications.
11. Officer of the Watch training introduced
12. Training in port operations undertaken
13. Percentage increase in the number of qualified employees in the public service.
14. The establishment, endorsement, and implementation of the National Sport Policy

Education Sector Strategic Plan 2016-2019 Draft Indicators

A major review of the ESSP key performance indicators will be undertaken in 2016 to establish accurate benchmarks for targets to be set for the period to the end of 2019. These will be incorporated when ESSP 2016-2019 is reviewed at the end of 2016.

Priority Indicators for review in 2016

- net enrolment rate for males and females in primary education
- net intake rate (portion of new entrants into Year 1 primary) for males and females
- the survival rate for Year 5 for males and females
- the transition rate from Year 6 to Year 7 for males and females
- the proportion of teachers having the required minimum qualification to teach
- student to teacher ratio in primary education
- portion of Year 4 and Year 6 students performing at or above STAKI expected levels in Te-Kiribati, English, and numeracy
- percentage of students with disabilities enrolled in mainstream schools
- percentage of children enrolled in early childhood education programs

Other ESSP Draft Indicators

- 100% senior managers received professional development, 2019
- Research unit established, 2017; generating commissioned research, 2018-2019
- MoE financial reporting system established, 2016; generating monthly reports for activity managers and senior management, 2017-2019
- ESSP 2016-2019 adjusted six-monthly following review of activities and in line with funding provision and ministerial priorities, 2016-2019
- Teachers registered: 50% - 2017; 90% - 2019
- Teachers Qualified: 40% - 2017; 80% - 2019
- Teachers meet TSS, SLSS requirements, 40% - 2017; 90% - 2019
- Teachers meet English language requirements, 40% - 2016; 85% - 2019
- Language in Education Policy, revised, 2016
- National Curriculum Assessment Framework, revised 2016
- Resource/Support materials, revised, 2017-2019
- Curriculum documents and support materials, years 7-9, 2016-2019
- School-based and other in-service activities/program supporting curriculum rollout
- Institutional improvement plan, 2016
- 40% of academic staff qualified to Masters level, 2019
- All academic programs restructured to international standards, 2019
- Facilities refurbished, 2019
- International accreditation requirements met, 2019
- National campaign to engage parents, 2016-2017
- 80% of eligible six-year-olds (boys and girls) attending 95% or more by 2019
- Island-based PD coaches to support transition into English in the primary and secondary schools increased by 20%, 2017
- STAKI assessment extended to Year 7 and Year 9, 2018-2019
- 50% of students performing at or above the STAKI expected level in English and te-

Kiribati & 70% in Numeracy

- eLearning strategy, 2017
- Curriculum materials 2017-2019
- Teachers trained in the use of ICT technology and methodology in the classroom
- Junior secondary schools equipped with relevant ICT equipment, 2019
- Provision of alternate pathways, years 10-12, for study or work, by 2019
- Refurbishment of schools to National Infrastructure Standards, 90% by 2019
- WASH resources extended to 90% of schools by 2017
- 80% of rations to schools delivered by the start of each academic term, 2016
- 95% of rations to schools delivered by the start of each academic term, 2019 will will later
- Establishment of the island education coordination system
- Baseline survey to determine size and nature of the target population, 2016
- Regulations documented and entered into database, 100% by 2017, ongoing activity
- School Leadership & Management Handbook, reviewed annually from 2016
- 20% increase in the number of boys and girls enrolled in ECCE
- 100% of ECCE centres registered
- 80% of ESSP activities in which development partners and stakeholders are providing effective support consistent with MOE and KEIP priorities
- 80% of total ESSP costing supported by development partners & stakeholders

b. Regional

The Pacific Education Development Framework 2009-2015 (PEDF): Monitoring and Evaluation Framework

Sub-Sector 1: Early Childhood Care and Education (ECCE)

1. Net Enrolment Ratio
2. Gross Enrolment Ratio
3. Student/Teacher Ratio
4. Number (%) ECCE Centres which meet National Minimum Quality Standards
5. Implementation of quality ECCE curriculum
6. Existence of National ECCE Policy and Planning Framework
7. EMIS inclusive of ECCE data

Sub-Sector 2: Formal Education

8. Net enrolment ratio (NER)
9. Gross enrolment ratio (GER)
10. Percentage new entrance to 1st year primary with ecce experience
11. Repetition rate (RR)
12. Drop-out rate (DR)
13. Promotion rate (PR)
14. Transition rate (primary/secondary)
15. Percentage schools with effective access to IT.
16. Percentage out-of-school children returning to formal schooling
17. Literacy rate
18. Numeracy rate.
19. Student teacher ratio (STR).
20. Student classroom ratio (SCR).
21. Student Computer ratio (SComR)
22. Percentage schools with clean water and sanitation.
23. Percentage school leavers leaving with at least a national or regional qualification
24. Frequency of curriculum review
25. Compulsory education policy developed and implemented.
26. Language policy developed.

Sub-Sector 3: Technical vocational education and training (TVET)

27. Gross enrolment ratio in TVET programs (VGER) – ISCED2
28. Percentage TVET training providers registered with National Accreditation Authority
29. Percentage TVET courses professionally assessed/validated by NAA or IAA).
30. Number of courses supported by strong industry links or partnerships through sponsorship or guarantee of employment.
31. Number of TVET courses that are competency-based (work-based skills).
32. Number of graduates with national TVET qualifications.
33. Number of TVET graduates who are gainfully employed.
34. Number of industry stakeholders/employers engaged in development of policies for skills development.

Sub-sector 4: Non-formal Education (NFE)

35. Adult literacy rate (ALR).
36. Participation Rate in NFE
37. Participants/instructor ratio
38. Existence of NFE policy.
39. Percentage of NFE providers promoting gender equality.
40. Number of NGOs delivering NFE programs.
41. Existence of pathways between formal, non-formal and informal education.

Sub-sector 5: Teacher development

42. Percentage of Qualified/Untrained teachers as per national minimum standards
43. Existence of beginning teacher induction/mentoring programs in relation to teacher professional standards.
44. Percentage teachers/school principals that undertook targeted professional development within the past 2 years.
45. Percentage teachers assessed as requiring additional advice or guidance under the teacher performance management system.
46. Percentage teachers teaching outside areas or levels of curriculum specialization
47. Percentage teaching positions filled by staff from outside the country.
48. Percentage teaching positions unfilled by end of term 1.
49. Percentage teachers leaving the profession prior to retirement age.
50. Percentage ECCE teachers under government employment.
51. Teacher training curriculum that includes mandatory course on Disability-Inclusive Education.

Sub-Sector 6: System Governance and Administration.

52. Existence of mid-term strategy to ensure achievement of sector plans.
53. Percentage policy and planning staff involved in ongoing training and professional development
54. Clear outline of obligations by donors/executing agencies in line with individual arrangements and international declarations.
55. Percentage national budget (development and recurrent) allocated to education sector.
56. Percentage wealth of a country (GDP or GNI) allocated to education (per capita).
57. Existence of EMIS that is able to support evidence-based decision making and planning for improvement of education systems.
58. Percentage of qualified and trained personnel to operate and support EMIS.
59. PEDF M&E framework aligned with national M&E system.
60. National annual education statistics report published and disseminated.
61. Existence of communication strategy and agreements with other agencies to support education outcomes.
62. Reduction in irregularities to assure transparency and accountability.

c. International

UNESCO (UIS) Survey of Formal Education

Each year the UNESCO Institute for Statistics (UIS) runs a Survey of Formal Education to provide internationally comparable data on key aspects of education systems, such as access, participation, progression and completion, as well as the associated human and financial resources dedicated to them. The survey collects information on formal education programmes only classified by level of education as defined in the ISCED 2011 revision. The following questionnaires comprise the Survey of Formal Education: UIS/E/A on students and teachers (ISCED 0-4); UIS/E/B on educational expenditure; and UIS/E/C on students and teachers (ISCED 5-8).

ISCED 0-4

A2: Number of students by level of education, intensity of participation, type of institution and sex

A3: Number of students by level of education, age and sex

A4: Number of students in formal adult education by level of education, age and sex

A5: Number of students and repeaters in initial primary education by age, grade and sex

A6: Number of students and repeaters in initial lower and upper secondary general education by grade, age and sex

A7: Number of new entrants to Grade 1 in initial education and prior enrolment by age and sex

A8: Number of graduates by level of education, type of completion and sex

A9: Number of classroom teachers by teaching level of education, employment status, type of institution and sex

A10: Number of classroom teachers by qualified and trained status, teaching level of education, type of institution and sex

Educational expenditure

B2: Educational expenditure by level of education, source and destination in instructional and non-instructional institutions

B3: Education expenditure by level of education, type of institution and nature in instructional and non-instructional institutions

ISCED 5-8

C2: Number of students by level of education, intensity of participation, type of institution and sex

C3: Number of students by level of education, field and sex

C4: Number of new entrants and first-time new entrants by level of education and sex

C5: Number of students and first-time new entrants to tertiary education by age and sex

C6: Number of internationally mobile students in tertiary education by country of origin and sex

C7: Number of graduates by level of education, field and sex

C8: Number of academic staff by level of education, employment status, type of institution and sex

Sustainable Development Goal (SDG Goal 4)

- 4.1.1. Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex
- 4.2.1: Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex
- 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by sex
- 4.3.1: Participation rate of youth and adults in formal and non-formal education and training in the last 12 months, by sex
- 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill
- 4.5.1: Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) or all education indicators on this list that can be disaggregated
- 4.6.1: Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex
- 4.7.1: Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment
- 4.a.1: Proportion of schools with access to : (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; (g) basic handwashing facilities (as per the WASH indicator definitions)
- 4.b.1: Volume of official development assistance flows for scholarships by sector and type of study
- 4.c.1: Percentage of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (i.e. pedagogical training) pre-service or in -service required for teaching at the relevant level in a given country

b. Producers of education statistics

Ministry of Education

Information required from schools

The School Leadership and Management Handbook (2014) states the Principal should enrol every primary child who reaches six years between the month of May the previous year and May the present year and should complete the School Enrolment Form and Register by entering the following details: admission number, the child's name and parents' name, child's date of birth, gender, address, home island, health status, religion and contact number for emergency cases. Principals must ensure that the School Enrolment Form is completed in full by the parent and that the information is recorded accurately in School Register on first day of enrolment. School must have an Attendance Register for each Year Level to record the child daily attendance and should be completed each day

The School Leadership and Management Handbook (2014) states that the Principal should collect all necessary information - make sure it is current and accurate - store it safely in the school office; Principal must keep up-to-date and accurate records in the school files. These records and files are to be used in completing the School Returns and Reports to the IEC & MoE. Principals must ensure that all Returns and Reports are completed in full; accurate in every detail; and reach the responsible Officer/SIU by the due dates indicated in the following calendar of Returns & Reports.

Date Due	Return/Report	Send to...
FEB 15	Enrolment Return + Class Lists - Term 1	IEC & DEO
15	School Staff Return & School Calendar	IEC & DEO
15	Teacher Housing Report	IEC & DEO
MAR 31	School Ration Return	IEC, DEO & FMU
APR 30	SIP Term 1 Progress Report	IEC & DEO
30	Annual School Survey Forms	IEC & TSIMU
MAY 2	Attendance Summary + School Report-T1	IEC & DEO
23	Enrolment Return + Class Lists - Term 2	IEC & DEO
JUN 30	ACR PA Forms (1st half)	IEC & DEO
JUL 30	Final receipt of transfer request.	DEO
AUG 15	Attendance Summary+ School Report-T2	IEC & DEO
30	SIP Term 2 Progress Report	IEC & DEO
SEP 5	Enrolment Return + Class Lists - Term 3	IEC & DEO
OCT 30	Final Postings and letters send to Teachers.	IEC
NOV 30	SIP / SIP Term 3 Progress Report	IEC & DEO
30	Teacher Performance Appraisal Reports	IEC & DEO
30	SIP Action Plan to concerned School	IEC & DEO
DEC 1	Attendance Summary + School Report T3	IEC & DEO

Production and dissemination of statistics

The latest published Digest for Education Statistics is for 2012 and provides detailed information on schools, students and teachers in Kiribati. Also the digest includes the following Education For All Indicators:

- EFA 1: Gross Enrolment Ratio - Early Childhood Education.
- EFA 2: Percentage of new entrants into Primary School who have attended Early Childhood Education (ECE) programs
- EFA 3: Gross Intake Rate
- EFA 4: Net Intake Rate
- EFA 5: Gross Enrolment Ratio (GER)
- EFA 6: Net Enrolment Ratio (NER)
- EFA 7: Public Current Expenditure on Education
- EFA 8: Public Expenditure on Each Education Sector as a Percentage of Total Expenditure on Education
- EFA 9: Percentage of Teachers Having the Required Academic Qualifications to
- EFA 10: Percentage of Teachers who are certified to Teach According to National Standards
- EFA 11: Pupil Teacher Ratio
- EFA 12: Repetition Rates
- EFA 13: Survival Rate to Class
- EFA 14: Transition Rate from Class 6 to Form 1
- EFA 15: Transition Rate from Form 3 to Form 4

The 2014 draft of the Digest for Education Statistics was remodelled to provide high quality educational statistics, particularly related to the accessibility and quality of education in Kiribati. The Digest provides information on priority areas targeted by the 2012-2015 Education Sector Strategic Plan, and international and regional performance indicators. This information will support evidence based policy and planning, and will be a useful resource for all stakeholders with an interest in the status of education in Kiribati. In line with the goal of supporting monitoring and evaluation of Kiribati's strategic goals and facilitating evidence based policy and planning, the information provided in the report has been organised into two overarching sections:

- 3.9 Access to Education – this section provides fundamental information on student enrolments, numbers of teachers and schools. Where possible information is disaggregated on the basis of demographic and educational factors including age group and sex, class level, school type and geographical location. Using population estimates key education statistics for measuring access to education have been derived. These include the Net Intake Rate (NIR), Gross Enrolment Rate (GER) and Net Enrolment Rate (NER).
2. Quality of Education – results are provided for student to teacher ratios, numbers and proportions of qualified and certified teachers, and students repeating schooling. Results for the 2013 STAKI are a vital measure of the quality of education in Kiribati and as such are examined on the basis of factors including gender, level of schooling and specific skill areas. A comparison of outcomes for 2011 and 2013 is also provided.

Ministry of Labour and Human Resource Development (MLHRD)

The New Zealand Aid programme is assisting with establishing a database on the Regional Seasonal Employment (RSE) scheme and other employment programs (also helping with internet connectivity). Recently have starting to collect data from the training organisations. National careers counselling and employment centre was recently set up – this collects data on job seekers and from training centres.

MLHRD envisages maintain three separate databases, for TVET, local employment and seasonal worker programs (SWP, RSE, Norther Australia, fisheries). The TVET database will collect information on trainee enrolments and graduates from TVET providers, including KIT, APTC, KTC, Police, MTC, and USP.

Currently MLHRD do not publish any data or reports. The aim is to report to Cabinet and employers once database is set up and running. Australian Aid is also assisting Kiribati to improve its TVET sector, including the establishment and operation of a database (TVETIS) to track TVET students and graduates.

TVETSSP

The Governments of Kiribati and Australia have invested in the Technical and Vocational Education Training Sector Strengthening Program (TVETSSP) to improve the Technical and Vocational Education and Training (TVET) sector and respond to the significant need to develop workforce skills in Kiribati. The Program also represents a significant step in the partnership between Australia and Kiribati, with workforce skills development one of four high-level outcomes to be achieved under the Australia-Kiribati Partnership for Development.

The long-term vision of the TVETSSP is: to support the Government of Kiribati's vision for an internationally respected TVET system which plays a valued role in improving national economic growth and increasing the employability of I-Kiribati at home and abroad, especially its young women and men. The program was designed to contribute to three sector result areas: youth participation, workplace productivity and overseas employment opportunities – importantly the contribution that TVETSSP makes to these sector result areas will complement a suite of other efforts in this regard.

The TVET Information System (TVETIS) at the Ministry was developed with TVETSSP STA input and MLHRD technical officers, but has not progressed due to an unstable server environment within the Ministry. At the time of the review MLHRD staff expressed a desire to have access to TVETIS as the Ministry is deploying templates created by the STA and is collecting data from KIT, MTC, Kiribati Teachers' College (KTC) and USP; it is not however using this data to inform strategic and management decision making. MLHRD recognises the need for such a database and is therefore looking to create a combined database to track labour supply and, in the future, employment data.

Kiribati Statistics Office

The Kiribati National Statistics Office reproduces basic education statistics published by the Ministry of Education which is implicit recognition of these data being 'official'. The latest data published on the website by the NSO is for 2008. The time-series includes student enrolment and teacher numbers for Primary and Secondary Schools from 1999 – 2008. The following data are published on the website:

- Number of schools by type
- Number of students by gender
- Number of teachers by gender
- Student teacher ratio

Education status within the entire population is a theme of analysis in nearly all population censuses and household surveys (Population census, Household Income and Expenditure Survey, Demographic and Health survey). Below are education indicators published on the NSO website for 1985, 1995, 2005:

- Proportion of pupils completing primary school by gender
- Literacy rate, 15-24 years by gender
- Ratio of literate females to males of 15-24 year olds
- Highest of Level of Education Attained by gender

The Kiribati Population Census 2010 Analytical report provided some analysis of school attendance, education attainment and literacy:

- Table 7.4: Population aged 6 and over, and 15 and over by sex and by school attendance status, Kiribati 2010
- Figure 7.7: Population aged 5 and over attending school, by sex – Kiribati 2010
- Figure 7.8: Population aged 15 and over by educational attainment and sex – 2010
- Table 7.5: Literacy rate by region and sex, Kiribati 2010
- Figure 7.9: Literacy rate by age group and sex – 2010

Definitions in use

Digest of Education Statistics 2012

EFA 1: Gross Enrolment Ratio - Early Childhood Education.

GPI: Gender Parity Index. The GPI shown in each column is the ratio of the value for females over the value for males. A GPI of 1 indicates equal values for females and males. GPI less than 1 indicates the value for females is less than the value for males. Population data used in this report has been supplied by the National Statistics Office. These are projections derived from the 2005 Census data. The enrolments in Early Childhood Education are reported by primary schools.

EFA 3: Gross Intake Rate

The Gross Intake Rate (GIR) gives the number of new entrants into class one of Primary school, regardless of age, expressed as a percentage of the total population of official primary school entry-aged children (six year olds). This indicator measures the extent to which I-Kiribati children are accessing Primary school at Class One.

EFA 4: Net Intake Rate

The Net Intake Rate (NIR) shows the number of new entrants into class one primary who are of the official primary school entry age, expressed as a percentage of the total population of official primary school entry aged children. This indicator measures the percentage of children who start school at the official primary school start age (six years old).

EFA 5: Gross Enrolment Ratio (GER)

Number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the relevant official age group (primary: 6-11 year olds; JSS: 12-14 year olds; Senior Secondary: 15 – 18 year olds). This indicator measures the extent to which children are able to access education at various levels of the school system.

EFA 6: Net Enrolment Ratio (NER)

Number of pupils in the official age group for a given level of education expressed as a percentage of the total population in that age group. This indicator measures the extent to which children are accessing education at the right age at various levels of the school system.

EFA 7: Public Current Expenditure on Education

Indicator 7a expresses public current expenditure on education as a percentage of GNP.

Indicator 7b expresses public current expenditure on education per pupil as a percentage of GNP per capita. For calculation purposes, the same figures for Actual Education Expenditure were used as the Budgeted figures when Actual figures were not available. Where applicable, Current Expenditure and Total Expenditure were recorded as the same amounts.

EFA 8: Public Expenditure on Each Education Sector as a Percentage of Total Expenditure on Education.

This indicator measures the relative priority given to each education sector within overall public expenditure on education. For calculation purposes, the same figures for Actual Education Expenditure were used as the Budgeted figures when Actual figures were not available. Where applicable, Current Expenditure and Total Expenditure were recorded as the same amounts.

EFA 9: Percentage of Teachers Having the Required Academic Qualifications to Teach

Indicator Nine gives the percentage of teachers at each level of education who have attained at least

the minimum academic qualifications required by the national authorities for giving classes at schools. In Kiribati this is Form 5 for Primary Teachers and Form 7 for Junior and Senior Secondary Teachers.

EFA 10: Percentage of Teachers who are certified to Teach According to National Standards

Indicator Ten gives the percentage of teachers at each level of education who are certified to have completed at least the minimum required teacher training. In Kiribati this is a two year teaching certificate.

EFA 11: Pupil Teacher Ratio

Average number of pupils per teacher at a given level of education.

EFA 12: Repetition Rates

Percentage of pupils from a cohort enrolled in a given class level you re-enrol in that same class level in the following school year.

EFA 13: Survival Rate to Class 5

Survival rates measure the number of children who start primary school and reach some higher level in the system. The table shows the Survival rate to class 5 calculated for the last 3 years. Survival rate to class 5 is often internationally accepted as a minimum level for future adult literacy

EFA 14: Transition Rate from Class 6 to Form 1

Transition rates measure the percentage of children who move from one level of the education system (e.g Primary) to the next level (e.g Junior Secondary).

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Gender Parity Index (GPI): The proportion of female to male students. Values of 100 (or close to this value) indicate gender parity; values over 100 indicate a higher proportion of females, while values less than 100 indicate a lower proportion of females.

Gross Enrolment Ratio (GER): Total student enrolment in a defined school level (irrespective of age) expressed as a percentage of the total population who are of the official age group for that level of education.

Net Intake Rate (NIR): New entrants in the official school age group for a given level of education expressed as a percentage of the total population for the official age group for that level.

Net Enrolment Ratio (NER): Total student enrolment in the official school age group for a given level of schooling expressed as a percentage of the total population for the official age group for that level of schooling.

Survival Rate (SR): The proportion of a cohort of students who reach a given level of schooling expressed as percentage of students enrolled in the first level of the education cycle e.g. the proportion of a cohort of Class 1 students who complete for primary school education.

Transition Rate (TR): The number of students who were admitted to the first grade of a higher level of education in a given year, expressed as a percentage of the number of students enrolled in the final grade of the lower level of education in the previous year.

Student to Teacher Ratio (STR): The average number of students per teacher for a given level of schooling (UNESCO, 2009).

d. Methodological annex: DQAF & Good practices for the review of Education statistics.

The Data Quality Assessment Framework methodology was initially developed by the International Monetary Fund in 2002 to assess the quality of economic data¹⁸. From 2004 onward it was modified by the World Bank and UNESCO for use in the evaluation of education data, then successfully improved and implemented by the UNESCO Institute of Statistics in other parts of the world, notably Africa and Latin America, as the basis for national initiatives aiming at improving the monitoring of education.

The underlying principles used to create the quality framework for education statistics were:

the fundamental principles of official statistics as adopted in 2014 by the UN General Assembly¹⁹

- how excellent organisations design, manage and improve processes, products and services to generate increasing value for customers and other stakeholders (EFQM)²⁰
- that identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives (ISO)²¹
- that a desired result is achieved more efficiently when activities and related resources are managed as a process (so as to improve consistent and predictable results) (ISO)²²
- the international recommendations and standards (as the best proxy to most users needs) regarding education and related statistics, mainly promoted by the UNESCO Institute for Statistics (UIS).

A data quality assessment mission is generally designed as a traditional, friendly, quality or peer review, examining the observance of a list of practices, widely recognised as good practices and chosen to assess whether the production processes are properly controlled and managed for changes, and how close the actual statistical outputs could be to international standards (as the best proxy to most users needs). Each practice, chosen amongst internationally accepted statistical practices, is to be examined to appreciate whether it is actually:

1. *not observed*
2. *largely not observed*: Significant departures and significant action has to be engaged to achieve observance
3. *practice largely observed*: Some departures, but these are not seen as sufficient to raise doubts about the ability to observe it
4. *observed*: Current practices generally in observance meet or achieve the objectives without

¹⁸ [IMF Data Quality Reference Site](#)

¹⁹ [Fundamental Principles of Official Statistics](#)

²⁰ European Foundation for Quality Management <http://www.efqm.org/>

²¹ International Organization for Standardization <http://www.iso.org/iso/home.htm>, Quality management principles

²² Ibidem

any significant deficiencies

As a matter of principle, the good practices in the list below are to be viewed as permanent recommendations and together with the framework may be used by countries to conduct periodic self-evaluations to inform reports on the quality of education statistics sector-wide but also at sub-sector level.

Many of the good practices assume that it is intended to have a documentation policy in place, based on the understanding that good quality management requires a monitoring mechanism, based on systematic documentation of arrangements, decisions, plans, implemented plans of actions, their results, etc.

The team members conduct interviews with major stakeholders and examine relevant documentation available on websites or otherwise provided ; the team may formulate recommendations regarding the enabling environment, the organisation and the dissemination of the sector-wide production of official education statistics. Following on the review, it is assumed that the national authorities would devise and implement a plan targeting the permanent improvement of those practices assessed as not or partially observed.

The matrix is organized in a cascading structure that progresses from the abstract/general to the more concrete/specific. The first-digit level defines the six **dimensions**. The first-digit level is sub-divided by **sub-dimensions** (two-digit level) and **indicators** (three-digit level). At the next level, **practices**, (numbered sequentially from 1 to 140) describe quality features that may be considered in assessing the indicator.

DQAF Dimensions as the components of a general process.

ENABLERS	PRODUCTION	PRODUCTS
Pre-requisites of quality	Methodological soundness	Serviceability
Professional ethics	Accuracy and reliability	Accessibility

Number of items for each of the 6 dimensions

Dimension	Sub-Dimensions	Indicators	Practices
0 - Pre-requisites of quality	4	8	27
1 – Professional ethics	3	7	23
<i>Enablers sub-total</i>	<i>(7)</i>	<i>(15)</i>	<i>(50)</i>
2 - Methodological soundness	4	4	14
3 - Accuracy and reliability	5	8	41
<i>Production sub-total</i>	<i>(9)</i>	<i>(12)</i>	<i>(55)</i>

4 - Serviceability	3	6	12
5 - Accessibility	3	7	23
<i>Products sub-total</i>	<i>(6)</i>	<i>(13)</i>	<i>(35)</i>
Total	22	40	140

0- Pre-requisites of quality

Data quality is regulated by a framework of statistical laws, policies, standards and practices, and technical and human resources. This framework cannot exist in a vacuum. Pre-requisites of quality, as one of the dimensions of data quality, do not comprise a qualitative dimension, but refer to the evaluation and understanding of the institutional context in which the statistical processes exist and which is essential to the other dimensions. This dimension presents the integrated nature in which available statistical laws, as well as essential human and technical resources, impact on other quality dimensions.

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating statistics is clearly specified

1. A law, such as a statistical law, or other formal provision (e.g. inter-agency protocol or executive decree, or Education ACT) assigns primary responsibility to an agency (or agencies) and provides the authority to the agency (or agencies) for the collection, processing, and dissemination of the education statistical data.
2. Institutional arrangements are consistent with the above assignment of responsibility (e.g. other existing institutional Act's (including an existing Statistical ACT) that designates responsibilities to line ministries concerned with education statistics data).

0.1.2 Data sharing and coordination among agencies producing data are adequate

3. Arrangements or procedures are in place to ensure the efficient and timely flow of data between agencies (e.g. service level agreements to provide secondary sources of data, service level agreements between different levels of government responsible for data collection and reporting).
4. Arrangements are in place to ensure consistency of methods and results (e.g. service level agreements with education statistics data providers, available data producing standards).
5. Contacts (e.g. regular meetings and/or workshops) are maintained with other data producing agencies to ensure proper understanding of data requirements, to avoid duplication of effort, and to take into account respondent burden.

0.1.3 Respondents' data are to be kept confidential and used for statistical purposes only

The confidentiality of individual respondent's data is guaranteed and that guarantee is widely known

6. In collecting data, whether using administrative data or surveys, a law or other formal provision clearly states that individual responses are to be treated as confidential, and shall not be disclosed or used for other than statistical purposes unless disclosure is agreed to in writing by the respondent.
7. In collecting data, respondents are informed of their rights and obligations with regard to the provision of information, and they are informed that the information they provide will be used for statistical purposes only.

Procedures are in place to prevent disclosure of individual data

8. Access to individual data is restricted to authorized staff who require the information in the performance of their duties.
9. Steps are taken to secure the premises of the data producing agency and its computer systems to prevent unauthorized access to individual data.
- 0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response
A law or other formal provisions are adequate to mandate reporting of information to compile statistics
10. Data-producing agencies have the legal authority to collect data required to compile the statistical data.
11. If reporting is mandatory, there are penalties for non-compliance with reporting requirements (including misreporting), even if such provisions rarely need to be employed.
Data producing agencies consider carefully respondent burden
12. Data producing agencies provide assistance to respondents in completing and submitting forms (e.g. by providing a point of contact), in order to raise awareness of the importance of good quality statistics and creating goodwill.

0.2 Resources: Resources are commensurate with needs of statistical programs

- 0.2.1 Staff, financial, and computing resources are commensurate with statistical programs of the agency
Staff resources for compiling statistics are adequate to perform required tasks
13. Overall, the number of staff is adequate to perform the required tasks.
14. The qualifications, skills and experience of the staff are adequate. They are provided formal and on-the job training in statistics and related subjects.
15. Efforts are made to ensure the retention at any point of time of a core contingent of skilled staff (e.g. successive planning is taken into account).
Computing resources for compiling statistics are adequate to perform required tasks
16. Overall, sufficient resources are allocated and best efforts are made to exploit the full potential of modern computing technology for compiling and disseminating the statistical data.
17. Software utilized for compiling and analyzing data is adequate, continually updated, and well adapted to perform existing and emerging tasks.
18. Hardware is adequately provided to ensure efficient processing of data and management of the databases and adequately protected, including through provision of emergency back-up systems for retrieval of statistical series and updates in the event of natural disasters, accidents, and other unusual events.
Financial resources for compiling statistics are adequate to perform required tasks
19. Overall, financial resources for compiling data are adequate to perform required tasks and commensurate with the overall resource availability for the agency.
20. There are forward plans that allocate budgetary resources to future statistical development based upon identified statistical needs for compiling data.
21. Physical facilities (office building, furniture and equipment) and other resources (transportation arrangements) are adequate to perform required tasks.
- 0.2.2 Measures to ensure efficient use of resources are implemented
22. Managers in the data-producing agency promote a policy vision and a direction that is shared with the staff (through meetings, quality group sessions, circulation of information, etc.).
23. Management takes steps to develop and release the full potential of the staff.
24. Periodic reviews of working processes are undertaken to ensure that they improve.

0.3 Relevance: Education Statistics cover relevant information

25. Data users are consulted and/or kept informed on specific aspects of the current data (e.g. usefulness in terms of detail, periodicity and timeliness).
26. A structured and periodic process of consultation (e.g users' advisory committee or working groups) takes place to review the usefulness of existing statistics and to identify emerging data

requirements.

0.4 Quality awareness: Quality is a cornerstone of statistical work

0.4.1 Processes are in place to focus on quality

There is recognition in the organization that quality is a cornerstone of statistical work

27. High level management is sensitive to all dimensions of data quality, and promote a shared concern for quality; managers in the data producing agencies are accountable for the overall quality of data produced by the agency (e.g. integrity, methodological soundness, accuracy and reliability, timeliness, coherence, relevance, and accessibility).

1- Professional ethics

The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to. This dimension captures the notion that statistical systems should be based on adherence to the principle of objectivity in the collection, compilation, and dissemination of statistics. The dimension encompasses institutional arrangements that ensure professionalism in statistical policies and practices, transparency, and ethical standards.

1.1 Professionalism: Statistical policies and practices are guided by professional principles.

1.1.1 Statistics are compiled on an impartial basis.

The terms and conditions under which statistics are produced guarantee the professional independence of the data producing agency.

34 A law or other formal provision addresses the need for the professional independence of the data producing agency (umbrella agency and Education data producing agency) and prohibits interference from others including other government agencies, in the compilation and or dissemination of statistical information.

35 If there is no law or formal provision to support professional independence, traditions or cultures of professionalism are clearly recognized as essential to the credibility of statistical results (e.g. others including other government agencies, understand the importance or non interference.

Professionalism is actively promoted and supported within the data producing agency.

36 Formal (using internal and external experts) and on the job training in the methodology and compilation methods is provided.

37 Professionalism is promoted in the workplace (e.g. the publication of methodological papers, by encouraging participation in organizing lectures, conferences, and meetings with other professional groups, etc.).

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

38 The choice of data collection instruments, statistical techniques (e.g. processing and validation techniques) is based solely on statistical considerations.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

The data producing agency comments when its statistics are misinterpreted or misused.

39 The data-producing agency seeks to build trust in its work by commenting publicly on erroneous interpretations or misuse of the statistical data in the media and in other fora.

40 The data-producing agency seeks to prevent misinterpretation or misuse of statistics by providing explanatory materials and briefings (e.g. to the press), and by following closely the press and other media (e.g. by means of a clipping service).

1.2 Transparency: Statistical policies and practices are transparent.

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

41 Agencies publications and/or Websites reproduce material about the terms and conditions under which official statistics are compiled and disseminated (e.g. the statistical law, the fundamental principles of official statistics, mission statements, and codes of conduct under which official statistics are compiled and disseminated).

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

42 The public is made aware that the approval processes for the publication of the statistical data rests entirely with the data-producing agency e.g. data are approved by the signing authority prior to release.

1.2.3 Products of statistical agencies/units are clearly identified as such.

43 Data released to the public are clearly identified as the data producing agency's product (e.g. by name, logo, and insignia).

44 The data-producing agency requests attribution when its statistics are used or reproduced. (referencing the source, quoting)

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

45 Advance notice is given when major changes in methodology, sources, and statistical techniques are introduced.

1.3 Ethical standards: Policies and practices are guided by ethical standards.

1.3.1 Guidelines for staff behaviour are in place and are well known to the staff.

A clear set of ethical standards has been prepared.

46 There are clear guidelines outlining correct staff behaviour when the agency and its staff is confronted with potential conflict of interest situations (e.g. with respect to avoiding delayed data release in order to get a fee).

47 There are clear guidelines that make the connection between ethics and staff work (e.g. with respect to guarding against misuse and misrepresentation of statistics).

Staff are made aware of the ethical standards.

48 Agencies management acknowledges its status as role model and is vigilant in following the guidelines.

49 New staff members are made aware of the guidelines when they join the organization.

50 Staff members are reminded periodically of the guidelines.

2- Methodological soundness

The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices. This dimension covers the idea that the methodological basis for the production of statistics should be sound and that this can be attained by following internationally accepted standards, guidelines, or good practices. This dimension is necessarily dataset-specific, reflecting different methodologies for different datasets.

2.1 Concepts and definitions: Concepts and definitions used are in accord with standard statistical frameworks.

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.

The concepts and definitions follow internationally accepted standards, guidelines, or good practices.

51 Documentation on national concepts and definitions is available. It covers all major aspects of the dataset.

52 Concepts and definitions follow those used by the UIS, namely the definitions in the UIS/UOE

manuals (full-time/part-time enrolment and teachers, private/public, etc.).

53 Deviations from the above concepts and definitions are kept under review.

54 Concepts and definitions used for this dataset are consistent with those used in other national datasets. Deviations are well reasoned.

2.2 Scope: The scope is in accord with internationally accepted standards, guidelines, or good practices.

2.2.1 The scope of the dataset is broadly consistent with internationally accepted standards, guidelines, or good practices.

The scope of the dataset is consistent with the needs to contribute to a sector wide system of education statistics. Scope of this dataset complements other datasets in the system of sector wide education statistics.

55 All relevant educational institutions and programmes are covered. - formal and non-formal

56 Relevant geographical boundaries are used.

57 The dataset does not introduce redundancies, i.e. its scope does not overlap with other datasets.

2.3 Classification/sectorization: Classification and sectorization systems are in accord with national and internationally accepted standards, guidelines, or good practices.

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.

The classification of statistics complies with internationally accepted standards, guidelines, or good practices such as:

58 A national classification of education levels and programmes exist and is applied in this survey. The implementation of the national classification is harmonized with other datasets.

59 An agreed UIS ISCED mapping exists and the team responsible of the dataset is aware of the most recent version of the countries UIS ISCED mapping.

60 Classifications are in accordance with those included in ISCED (e.g. levels of education, field of study, literacy, vocational, technical, and student achievement according to the International Standard Classification of Education (ISCED 2011).

61 A national classification of public and private education exists and allows reporting according to UIS definitions.

2.4 Basis for recording: Data are recorded according to internationally accepted standards, guidelines, or good practices.

2.4.1 Recording system follows internationally accepted standards, guidelines, or good practices.

62 The age of students is recorded according to a specific reference period/date.

63 Graduates' data are attributed to academic year in which the graduates are enrolled.

64 Expenditure data refer to actual expenditure.

3- Accuracy and reliability

This dimension of quality is based on the principle that data produced give an adequate picture of the reality of the education sector. Therefore, this dimension is specific for each data set and reflects the specificity of its sources and treatments. The elements of this dimension cover:

- source data
- statistical techniques
- assessment and validation of source data
- assessment and validation of intermediate data and statistical outputs.

3.1 Source data available provide an adequate basis to compile statistics.

3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions.

Statistics on enrolment and education resources collected through a regular administrative school census program.

65 An annual administrative routine data collection exercise gathers information on structure of the educational system, students, teachers, and examinations.

66 Coverage is comprehensive in terms of geographic areas (local, regional, central).

67 Coverage is comprehensive in terms of relevant sub-groups of units of collection (e.g. male and female students and teachers, public and private schools, trained and untrained teachers, full-time and part-time students and teachers).

68 School list maintenance procedures are adequate (duplicates, confusion in naming, robustness of administrative code, other noticed discrepancies).

69 The reporting of age data is reliable.

Statistics on Expenditures are collected for all sources of funds and types of expenditure and by level of education.

70 Public (government) data from the levels of government (central, regional, local).

71 Private sources of funds: households and others.

72 International sources of funds from public multilateral organisations for development aid to education including local and foreign NGO's.

Statistics on the quality of learning outcomes collected through assessments of student achievement.

73 There is a regular programme assessment of student achievement, at one or more ages/or levels of education or one or more areas of learning.

74 Assessments include background questionnaires of students and school administrators (principals), for the purpose of being able to study the relationships between family, socio-economic, and school factors contributing to learning outcomes.

3.1.2 Source data reasonably approximate the definitions, scope, classifications, and time of recording required.

75 Source data reasonably approximate the definitions, scope, classifications, and time of recording required.

76 Estimates for school age populations are reasonably up-to-date.

3.1.3 Source data are timely. Data collection system provides for the timely receipt of source data and detailed data.

77 Respondents are made aware of the deadlines set for reporting data.

78 The data producing agencies employ rigorous follow-up procedures to ensure the timely receipt of respondents data.

3.2 Assessment of source data: Source data are regularly assessed and validated.

Accuracy of information is routinely assessed.

79 Administrative and survey data are audited to check the accuracy of source data (e.g., inspection of field collections, random post-enumeration checks).

80 Information is compiled on coverage, sampling errors (where applicable), non-response errors (e.g., non response rates for various socio-economic groups), and the percentage of missing and/or imputed data by methods of imputation.

Appropriate measures are taken to validate data sources.

81 Measures (like audit, inspections, training) are taken to improve accuracy.

82 Data are compared with data from earlier years, to examine reasonableness of year-to-year changes and trends.

Considerations relating to administrative data, the use of school registers is promoted and the accuracy of school registers is periodically assessed:

83 The use of school registers is promoted and the accuracy of school registers is periodically assessed.

- 84 Students dropping out are removed from the register or identified as no longer enrolled.
- 85 Students moving or changing schools are removed from the register or identified as no longer enrolled.
- 86 The register includes all students currently enrolled.
- A register of all schools exists and it is well maintained*
- 87 A register of all schools exist
- 88 It is used to register responding or non responding schools.
- 89 Public and private schools are clearly identified.

3.3 Statistical technique : Statistical techniques employed conform to sound statistical procedures, and are documented.

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

Data procedures are sound.

90 Data compilation procedures minimize processing errors such as tabulation errors (=type of data, range etc.) and errors report generation.

91 The data collection instruments are designed in a way that makes them easy to complete and appropriate for computer processing, and they have also been pilot-tested with a sample of respondents.

92 If respondents fail to submit data due to a lack of resources, appropriate adjustments are made (missing data treatment).

93 Procedures are documented and updated as needed.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

94 Estimation and analysis employ sound statistical techniques (e.g. imputation, data adjustment).

95 Education statistics indicators are computed in accordance with the concepts outlined in Dimension 2.

96 Procedures are documented and updated as needed.

3.4 Assessment and validation of intermediate data as well as statistical outputs are regularly assessed and validated.

97 Data are compared with data from earlier years, to examine reasonableness of year-to-year changes and trends.

98 Data from different sources but measuring the same or closely related phenomena are compared against each other. Results are checked against demographic data, and other survey/census results.

99 Systematic processes are in place to monitor errors and omissions, and address data problems.

3.5 Archiving of source data and statistical results.

The database is structured according to relational standards.

100 Referential integrity is applied.

101 Nomenclatures are systematically used.

102 The database allows to store all information in the questionnaire.

The database is well documented.

103 A documentation material is available.

104 The name of the list of values (lov) tables are standardised.

105 Naming of variables is harmonized.

4- Serviceability

Statistics with adequate periodicity and timeliness are consistent. The quality dimension of serviceability looks at the extent to which statistics are useful for planning or policy purposes. It refers, mainly, to periodicity and timeliness, and consistency. Data is timely when it is

current or up-to-date as defined by the owner of the data. Data must be on time and available when it is required, otherwise the credibility of the information system diminishes. Given that data is actually accurate, it looks at the extent to which they reflect a reality either of the moment or of the past.

4.1 Periodicity and timeliness: Periodicity and timeliness follow internationally accepted dissemination standards.

4.1.1 Periodicity follows dissemination standards.

106 The administrative school census is conducted at least once a year.

107 Learning achievement surveys are regularly conducted according to a periodicity responding to the country monitoring needs.

108 Education finance statistics are published annually.

4.1.2 Timeliness follows dissemination standards.

109 Final statistics derived from the administrative school census are disseminated within 6 - 12 months after the start of the school year.

110 The finance statistics are disseminated within 6 - 12 months of the end of the financial year.

4.2 Consistency: Released statistics are consistent within a dataset and over time, and with other major datasets.

4.2.1 Final statistics are consistent within a dataset.

111 Accounting identities between aggregates: enrolments, repeaters, drop-outs, financial and demographic data are observed.

4.2.2 Final statistics are consistent or reconcilable over a reasonable period of time.

112 Consistent time data are available for an adequate period of time (at least five years).

113 When changes in methodology, statistical techniques or in data collection instruments are introduced, historical data are reconstructed as far back as reasonably possible.

4.2.3 Final statistics are consistent or reconcilable with those obtained through other surveys and data sources.

114 Education statistics are reasonably reconcilable with data from other sources including cross-checking across geographical areas and sub-groups of education.

4.3 Revision policy and practice: Data revisions follow a regular and publicized procedure.

115 Revisions follow a regular and transparent schedule.

116 Preliminary and/or revised data are clearly identified.

117 If studies / analyses of revisions are conducted there are made public.

5- Accessibility

Data and metadata are easily available and there is adequate client (user) support. This dimension is based on the principle that data and metadata should be presented in a clear and understandable way and should be easily available to users. Metadata should also be relevant and regularly updated. In addition, assistance to users should be available, efficient and performed in a reasonable time frame.

5.1 Data accessibility: Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.

5.1.1 Statistics data are presented in a way that facilitates proper interpretation and meaningful comparisons (e.g. layout and clarity of text, tables, and charts).

- 118 Education data are published in a clear manner, charts and tables are disseminated with the data to facilitate the analysis.
- 119 Analysis of current period estimates is available.
- 120 Depending on intended audience and purposes, data of different degree of aggregation (e.g. school region), sub-components (e.g. by gender, by level of education, by age, private and public, full-time and part-time) and additional data (e.g. demographic, socio-economic, geographic information) are routinely made available (not only ad-hoc answers).
- 5.1.2 Dissemination media and formats are adequate.
- 121 Data are first released via an information release, which is then followed by a more comprehensive publication.
- 122 More comprehensive publication follow information release(e.g. annual education statistical yearbook can be made available and disseminated).
- 123 Recently released data and longer time data can be accessed through an electronic database validated by the data producing agencies.
- 5.1.3 Statistics are released on a pre-announced schedule and made available to all users at the same time.
- 124 The statistical data is released according to a pre-announced schedule.
- 125 The statistical data is released simultaneously to all interested users on the date and or time specified in the pre-announced schedule.
- 126 The public is informed of the statistics being released and of the procedures to access them (e.g. Internet publications).
- 5.1.4 Statistics not routinely disseminated are made available upon request.
- 127 Not routinely disseminated (but non-confidential) specialized tabulations (e.g., sub-aggregates of units of analysis) are made available upon request.
- 128 Non-confidential micro-data files (e.g., with information permitting the identification of individual respondents removed) are available to permit analytical use by researchers and other users.
- 129 The public is informed of the not routinely disseminated and non-confidential data being available.

5.2 Metadata accessibility: Up-to-date and pertinent metadata are made available.

- 5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical methodologies and techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.
- The metadata for the statistical data provides users with an adequate information about what the data mean and about the methodology used to collect and process them.*
- 130 Metadata, including information on concepts, definitions, classification and other methodology, data sources, and statistical techniques are prepared.
- 131 The metadata is disseminated in a manner that facilitates its access (e.g., websites, statistical publications) and its availability is well publicized (e.g. in catalogues).
- 132 The General Data Dissemination System (GDDS) includes regularly reviewed and updated summary methodologies and other related metadata related to the different education statistics sub-sectors.
- The metadata also provides information on:*
- 133 Metadata provide information on elements that could affect the quality of the data and their interpretation (e.g. biases, response rates, etc.).
- 134 Deviations from internationally accepted standards, guidelines, or good practices are well documented in the metadata.
- 5.2.2 Levels of detail are adapted to the needs of the intended audience.
- 135 A brochure has been prepared to inform general users about the statistical data.
- 136 A brochure to inform analysts and other users of statistical data is available and updated

regularly.

5.3 Assistance with the users: Prompt and knowledgeable support service is available.

137 Prompt and knowledgeable service and support are available to users of statistics. All statistical releases identify specific individuals who may be contacted by mail, telephone, facsimile, or by email.

138 Assistance to users is monitored.

139 Users are informed about schedules for data requests (days when EMIS responds to users).

140 Requests for extra queries are monitored;

List of persons met and DQAF team members

Persons met

Honourable Alexander Teabo	Minister of Education, Tarawa, Kiribati
Ms Reetina Katokita	Director of Education, Ministry of Education
Ms Lucy Kum-on <i>(focal point for the mission)</i>	Director of Policy and Planning, Ministry of Education
Mr Kinta Eram Mr Tokitebwa Nabuange Mr Tebwaatoki, Uriraoi	Technology Support and Information Management Unit (TSIMU) Basic Education - Primary/JSS
Ms Beniana/Mr Eritiam	SSS & Scholarship Unit
Mr Toaiauea Toabwa	Examinations and Assessment Unit (EAU)
Ms Mikara	Finance/Accounting Unit
Mr Itibwebwe	Facilities Management Unit (FMU)
Ms Mariateretia Nauree	Curriculum Development and Resource Center (CDRC)
Ms Melea Ms Kaye Cox	Kiribati Early Childhood Education Association (KECEA) Kiribati Education Improvement Program (KEIP)
Mr Jason Reynolds	Director of Planning, Ministry of Finance and Economic Planning
Ms Aritita Tekaieti	Government Statistician, Ministry of Finance and Economic Planning
Ms Bwatetaake Taatoa	Director of Labour, Ministry of Labour and Human Resources Development
Ms	UNICEF
Mr Antoine Barnaart	Director, Kiribati Institute of Technology (KIT)
Mr Aberaam Tebitaki	Principal, Kiribati Teachers College
Dr Ueantabo McKenzie	Campus Director, University of the South Pacific (USP)
Ms. Samantha Vallance Ms Florence O'Connor	Department of Foreign Affairs and Trade. Australian High Commission, Tarawa

Principal	Sacred Heart Secondary School, Bikenibeu
Principal	TUC 1 Junior Secondary School, Bikenibeu
Head Teacher	Sunrise Primary School, Temaiku
Head Teacher	Mamatannana Primary school, Abatao

Team members

Mr Gregory Keeble	UIS Statistical Cluster Adviser, Pacific States
Mr. Scott Pontifex	SPC Regional EMIS Facility
Dr. Andrew Kibblewhite	SPC Consultant.
Mr. Michael Currie	DFAT Program Officer, Canberra

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