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GUIDELINES AND PROCESSES FOR LRMDS DEVELOPMENT AND PRODUCTION SYSTEM

VERSION: FINAL DRAFT V1.0.

DATE: MARCH 2009

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Amendment History

Date	Issue	Comment	Person
2 Feb 09	V0.1	First draft of document following Dev & Prod writeshop 26-30 Jan 09	C3 Team SA
3 March 09	V0.2	Review and feedback –TA's addition of specifications and instruments.	SA CL
13 March 09	Final Draft V1.0	Final Edit and Review for submission	SA

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Approvals

Name/Position	Signature	Date

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Glossary of Terms

ADM	Alternative Delivery Mode
AIP	Annual Implementation Plan
ALS	Alternative Learning System
BEAM,	Basic Education Assistance for Mindanao
BESRA	Basic Education Sector Reform Agenda
BALS	Bureau Alternative Learning Systems
BEE	Bureau Elementary Education
BSE	Bureau Secondary Education
CLC	Community Learning Centre
DEPD	Division Education Development Plan
DepED	Philippines Department of Education
EDPITAF	Education Projects Implementation Task Force
ICT	Information Communication Technology
ICTU	Information Communication Technology Unit
IMCS	Instructional Materials Commission
INSET	In-Service Education and Training
IP	Indigenous People
IPR	Intellectual Property Rights
LR	Learning Resource
LRM	Learning Resource Materials
LRMDS	Learning Resource Management and Development System
MOOE	Maintenance and Other Operating Expenses
NCBTS	National Competency Based Teacher Standards
NEAP	National Educators' Academy of the Philippines
PASMEP	Philippines-Australia Science and Mathematics Education Project
PPP	Public Private Partnerships
PROBE	Philippines- Australia Project in Basic Education
PRODED	Program for Decentralised Education
QA	Quality Assurance
REDP	Regional Education Development Plan
SBM	School-Based Management
SIP	School Implementation Plan
SEDIP	Secondary Education Development Improvement Project
SRC	School Report Card
STRIVE	Strengthening the Implementation of Basic Education in selected Provinces in the Visayas
TEEP	Third Elementary Education Project

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TLE	Technology and Livelihood Education
TR	Teacher Resource
UBD	Understanding by Design
UDL	Universal Design for Learning

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1 Introduction

The Learning Resources Management and Development System (LRMDS) comprises four integrated sub-systems designed to support increased distribution and access to learning, teaching and professional development resources at the Region, Division and School/Cluster levels of DepED.

The LRMDS provides access to quality resources from the Regions, Divisions, Cluster/School level: including,

- information on quantity and quality and location of textbooks and supplementary materials, and cultural expertise,
- access to learning, teaching and professional development resources in digital format and locates resources in print format and hard copy,
- standards, specifications and guidelines for:
    - assessing & evaluating,
    - acquiring & harvesting,
    - modification, development and production,
    - storage and maintenance, and;
    - publication and delivery.

The LRMDS also comprises a web based catalogue and online repository of learning, teaching and professional development resources. It functions as a clearinghouse. That is, the LRMDS provides information about the location of resources (hardcopy and softcopy) and allows users of the system to access directly digitized versions of resources that are published and stored within the LRMDS repository. It is also a quality assurance system providing support to DepED Regions, Divisions and Schools in the selection and acquisition of quality digital and non-digital resources in response to identified local educational needs.

The LRMDS System is more fully described in the LRMDS Framework v1.0.

2 LRMDS Development and Production System

The system for Development and Production is designed to support local development and or production of learning, teaching and professional development materials by the regions and divisions via the LRMDS. The system is designed to:

- support local design and redevelopment of existing learning and teaching resources by the region in response to identified needs of schools
- develop on behalf of Regional NEAP training and development resources and or PDMs for distribution via LRMDS
- support modification and translation of resources into mother tongue
- support reproduction of online and offline resources for distribution.

In the first instance the materials designated for development and production for access and distribution via the LRMDS will comprise Training and Development materials (TRs/PDMs) and existing LRs owned by DepED. Development and production of new LRs/TRs will be in response to School/Division needs analysis.

This document details Section 7.2 of the LRMDS Framework v1.0.

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2.1 Development and Production Personnel

The LRMDS Manager at the Region or Division and the LR Coordinator at the school are the persons responsible for development and production of resources at the respective level.

The core LRMDS team at the Region, Division or School/Cluster is as follows.

Region	Division	School
Core:	**Core**	**Core:**
LRMDS Manager/librarian	LRMDS Coordinator/librarian	LR Coordinator
LRMDS QA Coordinator	LRMDS QA/Production Coordinator	LR Committee
LRMDS Production Coordinator	Instructional Designer	Subject Teachers
Instructional Designer	Desk top Publisher/Developer	
Multimedia Developer/ Desktop Publisher	LRMDS Editor	
LRMDS Editor	**Additional:**	
Additional:	Curriculum/subject matter experts	
Curriculum/subject matter experts	Translators/ Writers	
Writers		
Translators		
Graphic artist		

Depending on the nature of the LR/TR/PDM Development and Production request, extra personnel may be required for inputs. For example, subject matter experts will generally be required for educational evaluation for purposes of redesigning or developing new resources. These experts may be drawn from the Region, Division, or School.

3 Development and Production of Learning, Teaching and Professional Development Resources

3.1 Purpose

The LRMDS Development and Production system is designed to support increased access to learning, teaching and professional development resources by schools, divisions and regions. It is specifically designed to support the local production and redevelopment of resources in response to local needs. That is, requests and recommendations for development and production of resources will usually be made in response to specific LR/TR or PDM resource needs that have been identified via the SIP/AIP (DEPD/REDP) process.

3.2 Conditions for Development and Production

To respond to the identified LR/TR or PDM needs, the school, division or region will conduct a process of assessment and evaluation, using the *Guidelines and Processes for LRMDS Assessment and Evaluation v1.0* of existing resources. The evaluation outcomes may result in a recommendation and request by the school, division or region for:

i) a resource to be reproduced and distributed (in existing format);

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ii) a resource to be redesigned and redeveloped for distribution; and/or,

iii) a new resource to be designed and developed.

Only resources that are owned and copyright DepED may be reproduced and redeveloped. These resources may have been produced by a Bureau, Region, or School or from Foreign Assisted Project (FAP) funding. Any request for production and development of non-DepED owned materials should be negotiated with the publisher and the DepED *Manual of Procedures for the Procurement of Goods and Services (RA 9184)* followed.

Existing DepED owned resources recommended and requested for development and production may be in one or more of the following formats:

- Print
- Digitized print
- Multimedia
- Offline non-digital (maps, cards, posters, manipulative)
- Offline Video and audio DVD, VCD, CD, VHS, cassette tape

4 Specifications overview

The LRMDS standards and specifications for LR, TR and PDM development and production define the educational and technical attributes required for access and use. A complete set of the Specifications is provided in Section 9.

The following specifications are developed and available from the LRMDS system. The LRMDS Regional Manager is responsible for maintaining the standards and specifications and communicating changes to all LRMDS users.

For each Development and Production process, described in Section 5, specific guidelines, evaluation tools and templates based on these specifications have been created and are included in this document in Sections 6, 7 and 8.

Table 1: LRMDS Specifications

Area of concern	Principles	Specifications
Educational: curriculum, subject matter, skills and processes, age and stage of schooling, cultural inclusivity and language of instruction	Educational requirements and indicators: • learning and teaching • content, • accessibility, • usability	LRMDS Educational Soundness Specification Section 9.1. LRMDS Educational Quality Evaluation Instruments Section 7. Instructional Design Guidelines Section 7.1
Accessibility: geospatial, physical and intellectual ability	Legal requirements/policy: • Special needs: physical, intellectual differences • Flexible operation and presentation: different rendering and presentation of information and data. • Device needs: utilise a wide range of devices or special assistive devices.	LRMDS Accessibility Specification Section 9.4 LRMDS Accessibility Evaluation criteria Section 7.7

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	• Appropriate learning design: users with varying capabilities and individual learning differences	
Technical: format, file size, authoring software, user plug-ins, players, software interoperability	• Accessibility: inclusive of teaching and learning capacities, contexts and environments • Usability: usable by a range of teachers and students • Interoperability: used and shared on and between a wide range of platforms, software and hardware • Flexibility: mixing and reusing learning resources from a range of sources • Durability: withstand technology changes • Scalability: technology selected is able to benefit from growth and reuse.	LRMDS Technical Specification Section 9.2 LRMDS Technical Evaluation checklist Section 7.9
Intellectual Property & rights management: IPR author, contributors, copyright, access and distribution, use	• Equitable: negotiation is balanced between rights owner and user • Authoritive: agreed format and presentation of rights information • Informative: communication of rights and conditions of use • Legal compliance: IP requirements	LRMDS Intellectual Property Management Specification Section 9.3 LRMDS Intellectual Property Evaluation Section 7.10
Storage & distribution: version control for management and maintenance, access Metadata	• version control: versions assigned and communicated • Metadata: each resource is catalogued • Discovery: varied access to discover, via unique log on, search and browse • Publish: varied formats- digital, print	LRMDS Maintenance and Storage System Guidelines and process Section 8. Catalogue Guidelines Section 8.1 Metadata Specification Section 9.5 Metadata guidelines and template Section 8.2
Publication & use: file types, formats for reproduction and usage permissions	• Communicated information contains: • Educational purpose • Version • Format • Copyright and rights information and conditions of use	LRMDS Maintenance and Storage System Guidelines and process Section 8.

5 Process and Guidelines for Development and Production

Depending of on the nature of the request and recommendation for development and production one or more of the processes outlined in Section 5 should be followed.

Any resource recommended for redevelopment and production must have conformed to the LRMDS Assessment and Evaluation requirements. Refer to *LRMDS Guidelines and Processes for Assessment and Evaluation Systemv1.0*.

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The **Request Brief for Development and Production** (Section 6.2) is completed and submitted with a copy of all completed evaluation forms and a copy of the evaluated resource to the LRMDS Coordinator (School level) or LRMDS Manager/Coordinator (Division and Region levels).

5.1 Reproduction of print based resources

5.1.1 Overview

Print based resources that are recommended to be reproduced in the existing format may be reprinted by DepED or by a commercial production facility.

Ideally, for reproduction of any resource the original master or high quality copy is used for the reprint and reproduction work.

Where an original master of the resource is not available or not able to be located a sample copy/reproduction of the resource should be made before authorising a large scale reproduction job.

If the sample reproduction is of a highly legible (readability, graphical clarity) quality then the reproduction and reprint run can proceed.

If the sample reproduction is of a low quality a decision can be made to create a new digital master copy of the material. The design, layout and content of the original resource are retained and the new master is created exactly as it was in the original version. The LRMDS Technical Specifications for Interoperability (Section 7.9) and Instructional Design Guidelines (Section 7.1) should be used.

The new master copy is then used for the mass production reprint/reproduction work.

The new digital master copy may then be uploaded to LRMDS and catalogued for future access by authorized DepED personnel via the LRMDS. Any upload to LRMDS of a resource requires that the copyright allows for this mode of distribution.

The detailed process and guidelines for reproduction of print materials is described below in Section 5.1.2, Table 1.

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5.1.2 Process and guidelines: reproduction of print based resources.

Table 1

PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
Submission of Request to LRMDS				
Request for reproduction of print resource submitted. This includes: • Completed Request Brief • Copy of the resource • Evaluation report/s.	LR Committee (school) LRMDS Manager (Division, Region)		Request Brief *Section 6.2*	Accomplished Request Brief
Review of submitted request	LR QA Coordinator/Production Coordinator LR Coordinator (school)		Request Brief is complete	Request Brief accepted. i) Original master submitted ii) No original master available Recommended test reproduction for resource. (A)
A. Reproduction Test				
1.Test print from: a) submitted master or; b) submitted copy in its current format to produce a test proof copy.	LRMDS Production Team			Print test: Proof produced
2. Review print test proof using the Print test proof evaluation If passed, proceed to step B If failed, report to Client.	Instructional Design and Development Coordinator/Client		Print test: Proof evaluation *Section 7.3*	**Evaluation passed** Recommendations for Reproduction Report to Client Proceed to (B) **Evaluation failed** Report to Client and determine whether to Proceed to (C).
B. **Prepare Project Plan** Determine print run quantity and	Production Coordinator		Project Plan Template *Section 6.1*	**Project Plan**

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PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
cost in-house versus outsource reproduction.				
Submit Project Plan to Client for approval	LRMDS Manager or Production Coordinator			Client Approved Project plan
1. Reproduction of the print resource	LRMDS Development and Production Team			Print run completed Report to Client Memorandum for Distribution to Supply Officer.
2. Distribution	Region or Division Supply Officer		Memorandum Receipt	Distribution of resources to Division, School completed.
3. Catalogue	LRMDS Metadata Coordinator LRMDS Coordinator/Manager		Metadata template *Section 8.2*	Completed metadata.
4.Publish Catalogue record	LRMDS Coordinator/Manager		Metadata template *Section 8.2*	Uploaded metadata and publish LRMDS catalogue record.
C. Existing low quality original copy	LR Production Team			
1. Determine reproduction output formats (word, pdf, html…) design and layout, graphics for digitization. Create Design Brief.	Instructional Designer and/or Desktop Publisher	Technical specifications *Section 9.2* Educational Soundness Specification *Section 9.1*	Design Brief for Digitization of print resource for reproduction *Section6.4* Educational & Editorial Evaluation for digitized print resources *Section 7.5* Technical specification *Section 9.2*	Design Brief for Digitized format prepared.
2. Prepare Project Plan Cost digitization Determine print run quantity and cost in-house verses outsource reproduction.	Instructional Designer and Production Coordinator		Project Plan Template *Section 6.1*	Project Plan completed
3. Client review Project Plan	Client LRMDS Coordinator/Manager			Client Project Plan approved LRMDS Coordinator/Manager approved Do not proceed without an

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PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
				approved Design Brief and Project Plan
4. Create new version requested print resource	Desktop Publisher	Technical specifications *Section 9.2*	Technical Evaluation Checklist *Section 7.9*	New digitized print test file
5. Test print one master copy in current design to produce a test proof	Desktop Publisher			Test Proof print
6. Review Test proof in terms of technical/educational specifications If passed, proceed to Step 8 If failed, go back to Steps 4 – 6, and if necessary consult Client.	Instructional Design and Development Coordinator/Client and Production Team	Technical specifications *Section 9.2* Educational Soundness Specification *Section9.1*	Technical Evaluation Checklist *Section7.9* Educational & Editorial Evaluation for digitized print resources *Section 7.5*	Test proof version evaluated. Recommendations for Reproduction
7. Reproduction of the digitized print resource	LRMDS Development and Production Team			Print run completed Report to Client/ LRMDS Coordinator/Manager Memorandum for Distribution to Supply Officer
8. Distribution	Region or Division Supply Officer		Memorandum Receipt	Distribution of resources to Division, School completed.
9. Catalogue	LRMDS Metadata Coordinator LRMDS Manager		Metadata template *Section8.2*	Completed metadata.
10. Upload digitized resource file to LRMDS repository	LRMDS Development and Production Team	LRMDS Maintenance and Storage System *Section 8*	Metadata Test access to resource via LRMDS	Metadata final Conformance test passed
11. Publish Catalogue record Uploaded metadata and publish LRMDS catalogue record	LRMDS Manager	Catalogue System *Section 8.1*	LRMDS Catalogue *Section 8*	Resource published in LRMDS

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5.2 Reproduction of offline digital resources

5.2.1 Overview

An existing DepED owned LR/TR/PDM that is in a physical format (offline digital) that precludes it being accessed and downloaded from LRMDS may be reproduced and distributed to schools, divisions and regions. For example, the resources could be published to CD, DVD, VCD, Videotape, and or Audio tape.

The existing resource is initially reviewed and evaluated using the guidelines and criteria to determine conformance with the Educational Soundness specification, Intellectual Property Rights specification and the Technical specifications. Refer to *LRMDS Guidelines and Processes for Assessment and Evaluation System v1.0*. The evaluation results should accompany the request for reproduction and be thoroughly checked and validated by LRMDS Production Coordinator.

Resources that are recommended to be reproduced in the existing format may be reproduced by DepED or by a commercial production facility.

Ideally, for reproduction of any resource the original master copy is used for the reproduction work.

Where an original master of the resource is not available or not able to be located a sample copy/reproduction of the resource should be made before authorising a large scale reproduction job.

It is critical that the technical format conforms to the Technical Specifications for offline digital resources. In particular, it is important to ensure that the software production format is compatible with current operating systems, video and audio players, browsers, software, and plug-in's. For example, a resource that is on CD in an early version of PageMaker is unlikely to be able to be accessed by most computers.

In instances where the authoring software of the content has been superseded the Client may request that the resource is redesigned and developed using up to date authoring software. For example, the resources produced in PageMaker could be redeveloped using Adobe or MS Office Authoring software.

For all DepED owned resources requiring redesign and redevelopment refer to Section 5.3-5.5.

If the resource requires redevelopment and is not owned by DepED the publisher and copyright owner should be contacted to determine availability of newer versions.

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5.2.2 Process and Guidelines: offline digital resources

Table 2

PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
Submission of Request to LRMDS				
Request for reproduction of DepED owned Digital offline resource (CD,DVD,VCD, audiotape, video tape) • Completed Request Brief • Copy of the resource • Evaluation report/s.	LR Committee (school) LRMDS Manager (Division, Region)		Request Brief *Section 6.2*	Completed Request Brief Copy of the resource Evaluation report/s.
Review of submitted request	LR QA Coordinator	Intellectual Property Rights Technical Specification *Section9.3*	Request Brief *Section 6.2* Intellectual Property Rights Evaluation *Section 7.10* Technical Evaluation checklist Section G and H. *Section 7.9*	Request Brief accepted. iii) Original master submitted iv) No original master available (copy only) v) Intellectual Property Rights cleared vi) Conforms to Technical requirements Recommended test reproduction for resource. (A) If non-conformance to any of i) -iv) refer to Client.
If the digital LR is commercially developed follow the procurement guidelines	LR Manager SDS,PSDS,SH Client		**Manual of Procedures for the Procurement of goods and Services (RA 9184)**	Completed Procurement documents.

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PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
A. Reproduction Test				
1. Test reproduction from: a) submitted master or; b) submitted copy in current format to produce a test proof copy	LRMDS Production Team			Proof test of reproduced resource.
2. Review test proof using the Technical evaluation If passed, proceed to step 3 If failed, report to Client.	Production Coordinator Client		Offline digital test: Technical evaluation *Section 7.4*	**Evaluation passed** Recommendations for Reproduction. Report to Client, Proceed to (3) **Evaluation failed** Report to Client. *If client seeks to have the resource redeveloped in a new format refer to Section 5.3.*
3. Prepare project plan	Production Coordinator		Project Plan Template *Section 6.1*	**Project Plan completed**
4. Determine cost and timeline for reproduction of resource in-house or outsource	Production Coordinator		Project Plan Template *Section 6.1*	Project Plan completed
5. Submit Project Plan to Client for approval	LRMDS Manager or Production Coordinator Client			Client Approved Project plan
6. Reproduction of the resource	LRMDS Development and Production Team			Print run completed Report to Client Memorandum for Distribution to Supply Officer
7. Distribution	Region or Division Supply Officer		Memorandum Receipt	Distribution of resources to Division, School completed.
8. Catalogue	LRMDS Metadata Coordinator LRMDS Manager		Metadata template *Section8.2*	Completed metadata.
9. Publish Catalogue record	LRMDS Manager	Metadata Specification	Metadata template *Section 8.2*	Published LRMDS catalogue

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PROCESS STEPS	PERSON/S RESPONSIBLE	Standards & Specs	Templates & Tools	Output
Upload metadata to LRMDS Catalogue		*Section 9.5*		record

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5.3 Overview of the key stages of design and development

Brief development		
Description	**Expertise**	**Product**
Design briefs are developed by the education design team. This team consists primarily of subject matter experts and educational specialists. The briefs are developed from the Request Brief, which describes the focus for learning, teaching or training resource development. Each brief should clearly: • define the learning objective and outcome • describe the nature of the learning/teaching/training activity and strategies for learning • describe the learning strategy in the context of the domain and discipline being targeted and in consideration of the attributes of the targeted audience.	Pedagogy Domain and discipline knowledge	The design brief should include: • learning objective and outcome • specific learning needs • learning strategy in relation to learner profile, age and cognitive ability; training strategies, teaching strategies. • suggested context for use.
Instructional and technical design specification		
Instructional and technical design specification is developed by the instructional designer in conjunction with subject matter experts and others in development team. In relation to the Design brief, the Instructional and technical design specification should: • describe the flow of learning and interaction design via flow diagrams or wireframes • describe design in relation to content and context (integrated knowledge and instructional and learning strategies, scenarios, situations, etc) • describe key user interface requirements (considerations of	Pedagogy Domain and discipline knowledge Instructional Design Desktop Publishing/Multimedia Development Graphic design (optional)	The Instructional and technical design specification should include: • learning, teaching, training outcome/competencies, purpose, and or objective • learning, teaching, training activity/ strategy • interaction design illustrated by a flow diagram, high level storyboards, or wireframes • examples or illustrations of the design approach/ style of interface, including proposed look and feel, navigation elements, use of audio, on-screen text, animation, video, images and graphics. (as appropriate) If the Instructional and technical design specification is for a package

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age and culture and navigational requirements for digital interactive resources) • describe feedback mechanisms to be employed, as well as the levels and type of feedback to support the learning/teaching/training strategy and approach – interactivity • provide an interaction design that focuses on active and critical learning/training (cognitive processes and feedback links).		of resources, modules or series (interaction and learning design is the same for all), then variations of the treatment of content in relation to target audience or content differences should be described. Evidence of consideration of: • accessibility requirements • technical requirements • educational soundness requirements • proposed intellectual property requirements.
Prototype or Alpha version		
A prototype or alpha version is developed from a Instructional and technical design specification. Team members involved at this stage are: the instructional designer and subject matter expert, the writer if required, graphic artist, and programmer. The prototype or alpha version should contain at least one pathway of learning (illustrative of the whole), including the intended feedback mechanism, sample content, an indication of interface design, placeholder graphics and artwork to indicate style.	Domain and discipline knowledge Instructional Design Desktop Publishing/Multimedia Development Graphic design (optional)	The prototype or alpha version should: • illustrate a learning pathway (semi-functional interactivity) • illustrate style in terms of look and feel • illustrate use of and type of feedback • contain sample content • contain placeholder graphics • contain notes to the reviewers regarding non-active elements.
Functional & Technical specification (scripts)		
Functional & Technical specification including scripts is developed by the instructional designer and the technical writer. Each functional specification must: • describe each on-screen event in terms of user action • delineate accessibility requirements	Domain and discipline knowledge Instructional Design Desktop Publishing/Multimedia Development Graphic design (optional) Writer Editor	The Functional & Technical specification should include: • the learning, teaching, training outcome/objective • a synopsis of the learning, teaching, training activity/s, purpose and context • a description of all on-screen user events and system response • the logic in the presentation of

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• contain the complete script. The script contains all on-screen content (screen text and audio) and describes content in relation to all visual representation (images, animations, video etc). An edit of the script content completed by the nominated LRMDS Editor. To complete their tasks effectively, the writer and editor must refer to all elements within the Functional & Technical specification.		content. • all on-screen text and audio, describe any animation, video etc • feedback mechanism • screen element IDs.
Beta		
The Beta version of the resource should be content complete, except for final audio. All interaction, including navigation and feedback, should also be complete. All third-party intellectual property must be included and signed off. Audio should be placeholder only. The Beta version is reviewed technically, editorially and educationally. Metadata is Drafted	Domain and discipline knowledge Instructional Design Desktop Publishing/Multimedia Development Graphic design (optional) Writer Editor	A content complete resource with placeholder audio. The Functional & Technical specification is finalised. Metadata is drafted
Conformance		
Final content compete version of the resource Metadata is reviewed	Programming Audio production	A content complete resource with the final audio. Final metadata
Publish	Complete and finalize metadata Upload resource to LRMDS	The resource is Catalogued and published in the LRMDS repository for access.

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5.4 Redesign and Development of Existing resources

5.4.1 Overview

The LRMDS Development and Production Team at the Region are primarily responsible for production of all new resources and for the redesign and development of existing materials for access via LRMDS by the Regions, Divisions and Schools.

For some resources only a translation of the original or minor edits is required. This type of development and production work can be undertaken by the Division LRMDS. However, upload and Catalogue of the newly developed resource would be managed by the Region.

Once a Request Brief has been submitted and is approved by LRMDS Coordinator/Manager, the LRMDS Development and Production team prepares a **Project Plan** (Section 6.1) and a **LRMDS Design Brief** (Section 6.4) for approval by the LRMDS Coordinator/Manager and the Client. Once the Project Plan and Design Brief are approved the Production Team creates the **Instructional and Technical Design Specification** (Section 6.5) and develops the alpha version (Section 5.3) of the resource.

The alpha version is reviewed by the Client and the LRMDS Quality Assurance Coordinator organises the required quality assurance (QA) reviews. The QA review outcomes are incorporated into the production of the beta version (Section 5.3). The beta version is reviewed by the Client and LRMDS QA team. Following acceptance of the beta version and documented modifications a final Conformance version is created for final QA and publication.

The LRMDS Manager signs off the final version, metadata is finalised and the resource can be uploaded and published in LRMDS.

Any mass production of the resource can be conducted by either the Region or Division depending on distribution requirements.

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5.4.2 Process and guidelines: redesign and developmentof existing resources

Table 3

Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
1. Request for redesign and development. Request Brief Copy of resource to be redesigned	Client		Request Brief *Section 6.2*	Completed Request Brief
2. Review Request Brief	LRMDS Production coordinator LRMDS QA Team		Review Request Brief (pointers) Copy of resource to be redesigned provided Assessment and Evaluation forms included.	Review report
3. If: 3a. Request Brief passed QA review, prepare a Design Brief and Project plan 3b. no, return to #1				
4. Prepare Project Plan	LRMDS Production Team LRMDS QA Team		Project Plan template *Section 6.1*	Completed Project Plan
5. Seek approval of requesting party of the Project Plan	LRMDS Manager Client			Approved Project Plan
6. If: 6a. Acceptable: Prepare Instructional and Technical Design Specifications 6b. Unacceptable: return to requesting party and re-negotiate the plan	Instructional Designer SME (optional)	Instructional Design Guidelines *Section 7.1* Technical Specifications *Section 9.2* Accessibility Specification *Section 9.4 (optional)*	Instructional and Technical Design Specifications templates *Section 6.5*	Instructional and Technical Design Specifications prepared.

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
7. Review Instructional and Technical Design Specifications	Client Another SME *Optional:* another Instructional Designer	Instructional Design Guidelines *Section 7.1*	Educational soundness Checklist *Section 7.2* Evaluation and review print resources *Section7.6* *OR* Evaluation and review non-print resources *Section7.8* Accessibility evaluation checklist *Section7.7(optional)*	Review Report
8. If: 8a. Acceptable: Prepare Alpha prototype 8b. Unacceptable: Revise Instructional and Technical Design Specifications	Instructional Designer SME (optional)	Instructional Design Guidelines *Section 7.1*		Approved or Revised Instructional and Technical Design Specifications
9. Create Alpha Prototype Version (Section 5.3)	Multi-media developer/ writer or Desktop publisher	Technical Specification *Section 9.2* Instructional Design Guidelines *Section 7.1*	Authoring software	Alpha Version/ Prototype material
10. QA Review I a) Content review b) Technical review If pass: prepare beta version **If fail:-Revise the Instructional and Technical Design Specification and review Project Plan. Discuss any project scope changes with the Client.**	QA Committee: ▪ Curriculum experts ▪ Language editor ▪ Technical experts Client	Educational Soundness Specification *Section 9.1* Instructional Design Specifications *Section 6.5* Accessibility Specification *Section 9.4 (optional)*	Educational Soundness Checklist *Section 7.2* Evaluation and review print resources *Section7.6* OR Evaluation and review non-print resources Section7.8 Accessibility evaluation checklist *Section7.7(optional)*	Review Report.

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
			Review Report *Section 6.8*	
11. Create Beta Version and Functional and Technical Specification (Section 5.3)	Multi-media developer/ writer Desktop publisher		Functional and Technical Specification template *Section 6.6* Authoring software	Functional and Technical specification and Beta Version of resource completed
12. QA Review II a) Content review b) Technical review If pass : proceed to 13 If fail: revise beta version and resubmit to QA Review II Update Project Plan.	QA Committee: ▪ Curriculum experts ▪ Language editor ▪ Technical experts	Educational Soundness Specifications *Section 9.1* Technical Specifications *Section 9.2* IPR specification *Section 9.3* *Accessibility Specification if the Design proposed Accessibility requirements.*	Educational Soundness Checklist *Section 7.2* Evaluation and review print resources *Section7.6* OR Evaluation and review non-print resources *Section7.8* Technical checklist *Section 7.9* Accessibility evaluation checklist *Section7.7(optional)* IPR Template *Section 7.10* Review Report *Section 6.8*	Review Report IPR Template completed for metadata.
13. If passed QA Review II Prepare final version Create the metadata specs	Multi-media developer/ writer Desktop publisher Metadata analyst and/or Librarian Production Coordinator	Metadata specification *Section 9.5*	Metadata template *Section 8.2*	Metadata completed for review.
14. Create/ Develop the final version	Multi-media developer/ writer Desktop publisher	Functional & Technical Specification *Section 6.6*	Functional and Technical specification *Section 6.6* Metadata template *Section 8.2*	Final Version Final Metadata Final Functional and Technical Specification

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
15. Secure final sign-off by Client	Client LRMDS Manager Production Team Coordinator			Approved final version
16. Cataloguing	LRMDS QA Group Metadata analyst /Librarian LRMDS Manager	Maintenance and Storage Guidelines *Section 8*	Metadata template *Section 8.2*	Complete metadata.
17. Upload digitized resource file to LRMDS repository Test access to resource via LRMDS	LRMDS Development and Production Team	LRMDS Maintenance and Storage System	Metadata template *Section 8.2* Conformance Test	Metadata final Conformance test passed
18. Publish Catalogue record Uploaded metadata and published LRMDS catalogue record	LRMDS Manager	Catalogue System *Section 8*	LRMDS Catalogue *Section 8.1*	Resource published in LRMDS
19. If: There is a request for reproduction and distribution refer to process as outlined in Section 5.1 for Print and 5.2 for Non-print distribution formats.	LRMDS Manager			

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5.5 Development and production of new resources

5.5.1 Overview

The LRMDS Development and Production Team at the Region is primarily responsible for production of all new resources for access via LRMDS by the Regions, Divisions and Schools.

The assessment of LR, TR and PDM needs is a responsibility of all levels. Schools/Clusters develop as part of the SIP and AIP a Learning Resource Plan. This plan identifies areas of school needs for LR/TR/PDM, to support the effective utilization of identified resources and the requisite teacher training/development in relation to:

- Underachievement – test results in national, regional/division (if any) and periodical examinations
- NCBTS Competencies – teacher competencies in subject area and pedagogy and resource gaps across subject and year levels
- Differentiated instruction and requirements of other populations that the school serves (for example, special education, special science curriculum or program for the gifted, etc.)
- Indigenization requirements
- Alternative modes of delivery to improve access to education of target populations (girls, out of school youth, seasonal absentees, etc.)
- Support facilities for the effective utilization of resources at the school level

The Division and Region consolidates the School/Cluster LR Plans and develops an LR Assistance Plan for Division Education Development Plan (DEDP) and Region Education Development Plan (REDP). The LR Assistance Plan identifies areas of need and proposes sources of support. This might include requests to the Region LRMDS for development and production of new resources by the Region LRMDS.

Development and production of new resources should only occur in the absence of any other source of a quality educational resource that may be readily distributed for access by schools.

Development and production of new resources requires a Design Brief to be created. This is usually created by a Curriculum Expert/s. The Design Brief is submitted to the LRMDS Manager. A Project Plan is developed and approved by Regional LRMDS Manager.

All requests for development of new Training and Development resources should include the completed **T and D Program Design Template** (Section 6.3) and **LRMDS Request Brief** (Section 6.2). The T and D Program Design should contain all content including suggested or specific graphics, art and media.

For resources requiring translation or localisation the design, development and production work can be undertaken by the Division LRMDS. However, upload and Catalogue of the newly developed resource is be managed by the Region.

The Instructional Designer will create in consultation with the Curriculum Expert/s the Instructional and Technical Design Specification and an alpha version of the resource. The alpha version is reviewed by the curriculum expert/s, it may also be evaluated in the field with end users and by LRMDS QA. The QA review outcomes are incorporated into the production of the beta version. The beta version is reviewed by the curriculum experts and LRMDS QA team. Following acceptance of the beta version and documented modifications a final Conformance version is created for final QA and publication.

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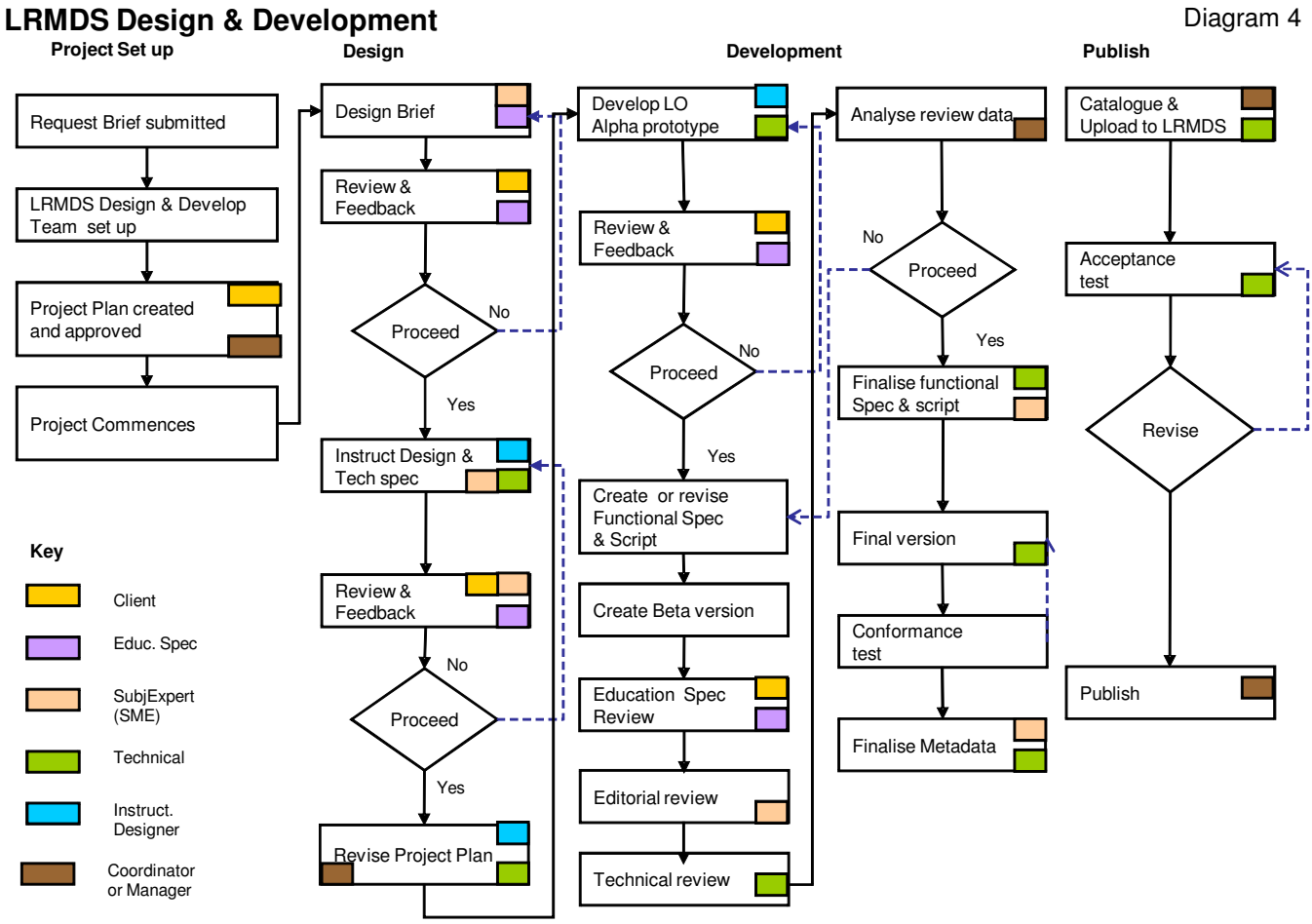
The LRMDS Manager signs off the final version, metadata is finalised and the resource can be uploaded and published in LRMDS.

Any mass production of the resource should be managed by either the Region or Division based on distribution requirements.

Diagram 1.



5.5.2 Process and guidelines: design and developmentof new resources

The process for development of new resources is much the same as the process for redesign and development. However, when designing new resources all the content needs to be newly created. This requires curriculum and subject matter experts to work on a Design Brief and for writers to be engaged to work with the Instructional Designer to develop the resource.

Creation of the Design Brief and Instructional and Technical Design Specifications will require more extensive reviews during the design and development process. In general as the level of interactivity of the resource increases so too does the time need for design, development and quality assurance.

Table 4

Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
Request for design and development of a new LR/TR/PDM	Client REDP/DEPD recommendations T and D Manager		Request Brief *Section 6.2*	Completed Request Brief for design and development of a new resource
Review request and determine personnel required to create the Design Brief and Specifications, including: subject matter/curriculum experts, content writers, instructional designer artwork, multimedia/desktop publishing and editors	QA Committee LR Manager Production Coordinator		Project Plan template *Section 6.1* LRMDS Design Brief *Section 6.4*	Educational Design Team set up.
1. Prepare Project Plan	LRMDS Production Team LRMDS QA Team		Project Plan template *Section 6.1*	Completed project plan
2. Project Plan approved	LRMDS Manager Production Coordinator Client (e.g T and D Manager)			Revised Project plan
3. Design Phase Define the key educational concepts, learning outcomes, competencies and activities Complete concept map/summary of scope Refer to Section 5.3.	Educational Design Team: Curriculum/Subject matter experts;	Educational Specifications *Section 9.1* Accessibility Specifications *Section 9.4 optional* Technical Specifications	Design Brief *Section 6.4*	Design Brief

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
		Section 9.2		
4. QA Review Review the Design Brief	Curriculum Expert (not a Ed Design Team member) Instructional Designer	Educational Specifications *Section 9.1* Accessibility Specifications *Section 9.4 optional* Technical Specifications *Section 9.2*	Educational Soundness Checklist *Section 7.2* Review Report *Section 6.8*	Approved Design Brief
5.If: 5a. Design Brief passed QA review, update Project plan 5b. no, return to #3 and revise	LRMDS Production Coordinator			Updated Project Plan
6. Create Instructional Design & Technical Specification Key concepts and competencies, describe learning activities, create story board and learning flowchart; Define proposed output format/s, identify artwork, graphics, audio, video required and source or creator.	Instructional Designer Curriculum Expert/writer. Desktop Publisher/ Multimedia Developer	Educational Specifications *Section 9.1* Accessibility Specifications *Section 9.4 optional* Technical Specifications *Section 9.2* Instructional Design Guidelines *Section 7.1*	Instructional Design and Technical Specification template *Section 6.5*	Instructional Design and Technical Specification
7. QA Review Review Instructional Design and Technical Specification	Education specialist (curriculum, subject matter) LR Production Coordinator Desk top Publisher/Multimedia Developer	Educational Accessibility Technical	Educational soundness checklist *Section 7.2* Evaluation and review print resources *Section7.6* OR Evaluation and review non-print resources *Section7.8* Technical checklist *Section*	Approved Instructional Design and Technical Specification

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
			7.9 optional Accessibility evaluation checklist *Section7.7(optional)* IPR Template *Section 7.10* Review Report *Section 6.8*	
8. If: 8a. Instructional and Technical Design Specification passed QA review, revise and fully cost development activity in the Project plan 8b. no, return to #6 and revise.	LRMDS Production Coordinator			
9. Review and revise Project Plan	LRMDS Production Team LRMDS QA Team		Project Plan template *Section 6.1*	Reviewed and revised Project Plan
10. Revised Project Plan approved	LRMDS Manager Production Coordinator Client (e.g T and D Manager)			Approved Revised Project plan
11. If: 11a. Acceptable: Prepare Alpha prototype 11b. Unacceptable: Revise the Project Plan and Instructional and Technical Design specification	Instructional Designer SME (optional)			Approved or Revised Instructional and Technical Design specification and Project Plan..
12. Create Alpha Prototype Version Section 5.3	Multi-media developer/ writer or Desktop publisher	Technical Specification *Section 9.2* Instructional Design Guidelines *Section 7.1*	Authoring software	Alpha Version/ Prototype material

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
13.QA Review I a. Content review b. Technical review If pass : prepare beta version If fail- Revise the Instructional Design Spec and review project plan. Discuss any project scope changes with the Client.	QA Committee: ▪ Curriculum experts ▪ Language editor ▪ Technical experts **For multimedia a field trial/evaluation is advised with target users (students, teachers, or trainers)**	Educational Soundness Specification *Section 9.1* Technical Specification *Section 9.2* Instructional Design Guidelines *Section 7.1*	Educational soundness checklist *Section 7.2* Evaluation and review print resources *Section7.6* OR Evaluation and review non-print resources *Section7.8* Technical checklist *Section 7.9 optional* Accessibility evaluation checklist *Section7.7(optional)* IPR Template *Section 7.10* Review Report *Section 6.8*	Review Report.
14. Create Beta Version and Functional and Technical specification **Refer to Section 5.3**	Multi-media developer/ writer Desktop publisher		Functional and Technical Specification template *Section6.6* Authoring software	Functional and Technical specification completed and Beta Version/ Prototype material
15. QA Review II a. Content review b. Technical review If pass : proceed to 11 If fail: revise beta version and resubmit to QA Review II Update project plan.	QA Committee: ▪ Curriculum experts ▪ Language editor ▪ Technical experts	Educational Soundness Specification *Section 9.1* Technical Specification *Section 9.2* Instructional Design Guidelines *Section 7.1* IPR specification *Section 9.3* *Accessibility Specification if the Design proposed Accessibility requirements.*	Educational soundness checklist *Section 7.2* Evaluation and review print resources *Section7.6* OR Evaluation and review non-print resources *Section7.8* Technical checklist *Section 7.9 optional* Accessibility evaluation checklist	Review Report IPR Template completed for metadata.

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Process Steps	Person/s Involved	Standards and Specs	Template/ Tool	Output
			Section7.7(optional) IPR Template *Section 7.10* Review Report *Section 6.8*	
16. If passed QA Review II a. Prepare final version b. Create the metadata specs	Multi-media developer/ writer Desktop publisher Metadata analyst and/or Librarian	Metadata specification *Section 9.5*	Metadata template *Section 8.2*	Metadata completed for review.
17. Create/Develop the final version **Refer to Section 5.3**	Multi-media developer/ writer Desktop publisher		Functional and Technical specification *Section 6.6* Metadata template *Section 8.2*	Final Version Final Metadata Final Functional and Technical Specification
18. Secure final sign-off of Client and LRMDS Manager	Client (e.g T and D Manager) LRMDS Manager Production Team Coordinator			
19. Cataloguing and publishing in the LRMDS repository Upload final version in LRMDS	LRMDS QA Group Metadata analyst /Librarian LRMDS Manager	Maintenance and Storage Guidelines *Section 8*	Upload final version Conformance Test Review Report *Section 6.8*	Published and Catalogued LR
20. IF: **There is a request for reproduction and distribution Refer to process as outlined in Section 5.1 for Print and 5.2 for non-print distribution formats.**	LRMDS Manager			

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5.6 School/Cluster Development and Production of resources

5.6.1 School based development and production of resources

The LRMDS processes for identification of learning resource need and planning for alleviation of the needs at the school, division and region are aligned to the thrusts of SBM under DepED Basic Education Sector Reform Agenda (BESRA).

The **School** Learning Resource Committee established at the school conducts completes and submits the LR Plan to the Division in conjunction with the annual AIP and triennial SIP processes. This is described in detail in Section 4 of the *Guidelines and Processes for LRMDS Assessment and Evaluation, V1.0.*

In response to the needs identified through the AIP/SIP planning process the School and or Cluster develops a Learning Resource Plan. This plan may identify development and production of teaching and learning resources at the school level as a strategy to respond to learning and teaching resource needs.

Depending on the nature of the resource development (redevelop or new development) it is expected that the school would use the Process and Guidelines for Development and Production as outlined in Sections 5.1-5.5 above. Using these guidelines and processes and the quality assurance review templates in Section 6, below, should ensure that the school is able to develop resources of a high educational and technical quality.

The Division can assist the school to develop capacity in learning resource development and production. It is a primary function of the Division to ensure that schools are able to access resources (funds and expertise) to ensure that the schools are able to respond directly to LR/TR/PDM needs.

Any resources developed at the school/cluster level may be submitted to the Division/Region to be shared and distributed to other schools.

5.6.2 Sharing teacher and school/cluster developed resources

Any resource produced locally may be submitted to the Division for evaluation to determine if it meets the quality requirements for wider distribution. To submit the resource the School LR Committee would undertake an initial evaluation as per the *Guidelines and Processes for LRMDS Assessment and Evaluation, V1.0*. If the resource passes this evaluation, the resource and the evaluation findings can be submitted to the Division for further evaluation. The Division will determine whether the resource will be reproduced and shared within the Division or whether it is suitable to be catalogued in LRMDS and or uploaded to the LRMDS for access by schools across the Region.

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6 Templates

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6.1 Project Plan Template

Project Code:

Client/Requesting party:

6.1.1 Project Title:

6.1.2 Project Purpose:

6.1.3 Project Description

What is the project aiming to achieve?

For example, to redesign and redevelop the PROBE Module X as an interactive teaching resource.

Refer to Request Brief (Insert Filename)

6.1.4 Project Objective/s

(What are you trying to accomplish, list the project goal and objective in terms that are clear, concise, achievable and measurable). OR refer to Request Brief.

Products to be created

(Include report, instructional materials, T and D Materials, software, graphics, information system, media, print document)

Services to be provided:

Sources of information (From what subject matter expert will you receive information and assistance? Will you need to do additional research?)

6.1.5 Anticipated Phases, Milestones, Schedule

Are there important milestones that will occur within in these phases? Identify specific schedule for the aspect you will be performing in the short term

Deliverable	Milestones	Date	Responsibility

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Required System and Equipment

(Include server, network, computers, other devices and other type of Equipment, software)

Tool, Templates and conventions to be used:

(Example: Includes style guides, file naming, presentation guidelines, technical guidelines, educational soundness guidelines, IPR, Accessibility standard operating system procedure and other templates)

Review and Approval Process

(Who needs to review and approve each phase of service, product, or other deliverable? How will reviewer comments be incorporated or otherwise addressed?)

List all Development QA milestones

Deliverables	Milestones	Date	Responsibility

6.1.6 Project Risk Assessment

(What potential risks exist with respect to funding, time, and resources? Are there cost, schedule, and quality trade-offs that should be evaluated? How will each risk be mitigated?)

Risk	Level (High/Medium/Low)	Management Strategy

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6.1.7 Communications and Reporting

(Include a high level Communications Plan here. Include a more detailed Communications Management Plan in the Appendices if required)

Stakeholder	Information Required/ Issues	When required	Format

6.1.8 Resources (personnel and funds):

Personnel:

Technical (list all LRMDS internal and external personnel for the project.)

Funding Source: Client and total budget

Itemise budget for each Deliverable

Deliverables	Cost	Fund source

Outline how you are going to track, monitor and report on the project. For example:

- Status Reports
- Exception Reports
- Issues/Risk Log
- Variance Requests

Appendices

List the Appendices that are attached to your Project Plan. For example:

- Request Brief
- Gantt Chart,
- Activities Schedule,
- Budget

Project Approvals

Add any signatures that are required for approval to be able to proceed to the next phase

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_____	_____
Project Manager	Project Sponsor
_____	_____
Project Client/Owner	Other

6.2 Request Brief

6.2.1 Purpose

A Request Brief is a written explanation - given to the development and production team by a requesting party or client to describe the specific service required and the general design requirements of the resource to be developed or produced.

The purpose of this document is to describe in detail the service required and the design requirements of a client/user for an existing resource that is to be reproduced, digitized, re-developed or for the design of new resources. The brief outlines the competencies, learning outcomes, objectives, and activities of a learning/teaching PD resource, the intended user of the resource and the context or environment in which a resource will be used. It would also include information relating to production output format, distribution and modes of preferred access.

A more thorough and articulate Design Brief which is a critical part of the design process will be prepared as part of the Development and Production process. It helps develop trust and understanding between the client and designer - and serves as an essential point of reference for both parties.

6.2.2 Check all the Services Requested

Reproduce print resource in current format

Digitize print resource

- Retain current design and layout
- Design and layout may be modified
- Create new version in print format

Reproduce off-line digital resource in current format

Re-develop an existing resource:

- Edit /correct/update content
- Retain all content
- Incorporate multimedia elements
- Redesign the existing resource by converting to:

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Print Digital (Online) Audio tape
Manipulative DVD/VCD Blended Technology

Translate existing resource into a different language:

☐ Filipino.....☐ English ☐ Mother tongue (specify) _____

Design and Develop a new resource

Print

Multimedia

Blended

Master Copy /Original copy of the resource attached

Yes

No

Evaluation forms of the resource attached

Yes

No

Number of copies requested: _____

Packaging and distribution/delivery instructions specify whenever applicable or required:

Catalogue the resource in LRMDS

Yes

No

6.2.3 General Description of the resource

Title of Resource: _____

Nature of resource: (Check the appropriate box)

Learning resource

Teaching Resource

Professional Development Material. Complete Section 3.3 and 3.4 and Section 8**.**

Current Format:

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Print

Offline digital

DVD

CD

VCD

Audiotape

Videotape

Other (specify) _____

Owner/Originator:

Author/Writer/s Name:

Name of Institution (School, Division, Region, Bureau)

Publisher's name (if commercially developed)

Copyright owner:

Address and contact number:

Year published:

Copyright year:

Curriculum/subject area/domain:

Target Users:

Grade/Year level/s (specify) _____

Adult learners in ALS: _____

ADMs (specify): _____

SPED (Specify) _____

Others (Specify) _____

6.2.4 Context in which the resource is intended to be used

ALS

Classroom:

Monograde

Multigrade

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Special programs:

Special Science curriculum

Voc-Tech

Special program for the Arts or other programs for the gifted

SPED (Specify) _____

Other (specify) _____

Alternative delivery modes (indicate modality and/ or program in which resource will be used)

Example: EASE, to be used as a print and off-line digital resource

6.2.5 Suggestions for redesign and development of an existing resource

Please provide the necessary information:

Key learning/teaching ideas/activity

Describe the **key activity** in relation to the concept that is intended to be learned.

Describe the **active learning processes** in relation to knowledge, skills associated with the domain/discipline.

Describe the **pedagogical/andragogical approach**, e.g., simulated investigation and proposed student interaction with data and information to be included.

Key learning/teaching ideas/activity

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Add any suggestions in relation to the realization of data and information. For example, *"it is important that the process being described is represented visually through interactive animations, or including game format activities"*, etc.

- Specific technical and/or accessibility requirements: (Example, specification of font size and kind for visually impaired, etc.)

6.2.6 Professional Development Resource

Complete this section for Requests to redesign and develop an existing Professional Development resource.

Attach a copy of the existing resource to this Request.

NOTE: For Development and Production of a **new** Professional Development Resource a completed Training and Development Program Design must be attached to this Request Brief.

Context in which this resource is to be used:

Mode of delivery (Check all that can apply)

Face to face training with facilitator

Individualized/Self-paced learning

Mentoring

Coaching

Other (describe)

Target group: identify

NCBTS competencies: Specify, if not covered in NCBTS.

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Objectives to be covered:

Topic/subject area

Key Concepts

Design Brief prepared by:

Name of Requesting Party:

Contact details:

Date:

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6.3 Training and Development: Program Design Template

Excerpt from DepED – EDPITAF-STRIVE GUIDE TO DEVELOPING T&D PROGRAM DESIGNS, 2008.

I. Identifying Information:

Program Title :	*(from MPPD/SPPD)*
Program Description:	*(from MPPD/SPPD)*
Related Programs:	*(identify any prerequisites or related programs which will follow)*
Duration :	*(outline the period of time which it will take to implement the program e.g. 2 days, April-May)*
Location of Program	*(e.g. school based/cluster based/division based/regional based)*
Facilitators	*(e.g. staff required to implement the program e.g. 1 Program manager, 2 facilitators*
Target Personnel:	*(from the MPPD/SPPD, including the number of paxs)*
Budget Allocation and Funding Source	*(from the MPPD/SPPD)*
Program Cost:	*(Include here total budget and attach budget breakdown. Indicate if the cost is additional to allocation as set by the MPPD/SPPD. If additional funds nare required, identify how much and possible sources)*
Resource material used to support PD	*(Identify here the resources which have been used to sipport the program design e.g. BEAM LeGs Title ……)*

II. **Rationale:** *(state the reason why the program is being provided, relate to the goal of the MPPD/SPPD)*

III. **Objectives:** *(taken from MPPD/SPPD)*

Competencies to be developed: *(taken from MPPD/SPPD)*

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IV. Implementation Structure

Delivery Mechanism: *(what mode will be used to deliver the program)*

Facilitators: *(what staff will be needed to implement the program e.g. managers/facilitators)*

Activity Schedule: *(outline how the program will be structured)*

V. **Program Content Matrix** *(provide an outline of the different phases of program and the expected outputs)*

VI. **Resources:** *(identify what resources will be required to implement the program e.g. LCD, manila paper, markers etc)*

VII. **Budget Requirements:** *(identify all the costs associated with the implementation of the program. Included budget breakdown as an attachment)*

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VIII. **M and E Processes** *(describe the M&E process which will be conducted as part of the program. Refer to specific tools which have been developed and include them as an attachment)*

Attachments to Program Design

1. Budget Breakdown

2. Support Materials (e.g. Handouts, PowerPoint's, Readings, SLE's)

3. Monitoring and Evaluation Tools (e.g. Participants review of program, Facilitators review of program, External M&E report on program)

Prepared by the following PDWG Members on _____ (date)

Funds Available:

_____ (Finance Officer) Date :

Recommending Approval:

Approved by:

T&D Chief/Chair/School Head

Date: _____

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6.4 LRMDS Design Brief

The purpose of this document is to describe the design requirements for an existing resource that is to be re-developed or for the design of new resources.

Project Code:

Client/Requesting party:

Complete all sections that apply.

☐ Request Brief approved

☐ Copy of resource provided

☐ Training and Development Program Design provided

☐ Evaluation results provided

6.4.1 Existing Resource Redevelopment Requirements:

Title

Format

Owner

Curriculum area

☐ Learning resource ☐ Teacher resource ☐ Professional Development Material

Grade/Year level/s

Teacher

Competencies

6.4.1.1 A. Existing Resources digitization only.

Select all that apply:

☐ Reproduce in digital format the current resource. Design, layout and all content are retained.

☐ Edit and correct content errors

☐ Translate existing resource into a different language. ☐ Filipino ☐ Mother tongue: Specify_____

6.4.1.2 B. Existing resource for redesign and development

Select all that apply.

☐ Edit and correct content errors

☐ Redesign the existing resource as a print based resource

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☐ Redesign the existing resource using multimedia (will include two or more of: text, image, animation, audio, video)

☐ Redesign the existing resource as an interactive resource.

☐ Redesign the existing resource for offline digital distribution

☐ Translate existing resource into a different language. ☐ Filipino ☐ Mother tongue: Specify_____

6.4.2 New resource design and development

☐ Training and Development Resource

☐ Learning or Teaching Resource

6.4.3 Design requirements

Complete all sections as appropriate. Supporting documents or information should be clearly referenced and attached.

Key ideas and learning, teaching or training outcomes

Key concept/s and competencies

Please provide the necessary information:

This resource will develop understanding of the following competencies:

This resource will develop understanding of the following concepts:

Learning or training outcome/competencies

Specific learning outcome/s and learning design considerations for this resource have been derived from these educational concepts/competencies. They have been defined with respect to the targeted learner profiles/focus.

Learning or training outcomes/competencies	Instructional design considerations

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What the user will know and be able to do as a result of using the resource for learning, teaching, training and development	*Considerations for information and interaction design, pedagogical and or andragogical approach underpinning resource design; requirements for SPED; ADM; other.*

Key learning/teaching or training ideas/activity

Describe the key activity/s in relation to the concepts to be learned.

Describe the active learning processes in relation to knowledge, skills and processes associated with the domain/discipline.

Describe the pedagogical/andragogical approach. E.g simulated investigation and proposed student interaction with data and information to be included.

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Additional Information

Note any suggestions in relation to the realization of data and information. *For example, "it is important that processes such as the process of photosynthesis is represented visually through an interactive or animation".*

Specific technical/accessibility requirements: (Example, specification of font, requirement for audio/video etc)

Education Design Team Members

In this table identify all personnel: curriculum, training or subject matter experts, graphic artists or other technical specialists, person coordinating/managing the project.

Name	Role	Contact details

Brief prepared by:

Name:

Contact details:

Date:

Approvals:

Client/Requesting unit

Name:

Signature:

Date:

LRMDS Manager

Name:

Signature:

Date:

Project/Production Coordinator

Name:

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Signature:

Date:

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LRMDS Instructional Design and Technical Specification Templates

The following templates have been provided to assist Instructional Designers and Curriculum and subject experts to design learning, teaching and professional development resources.

The templates should be used during the Design stage of development and production of resources after the Design Brief has been approved. The Instructional Design Template is completed to describe the pedagogical and instructional approach. Following the completion and approval of the Instructional Design template a prototype/alpha version of the resource is created.

The **Functional and Technical Specification** is then prepared as part of the Beta stage of development.

Refer to Section 5.3 – 5.5.

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6.4.4 UBD: Understanding by Design Template

Explanation of UbD concepts, terms and acronyms used

UbD	Understanding by Design
Understandings	Although knowledge is different from understanding although both are central to learning. UbD posits 6 facets of understanding which can help teachers identify the *enduring understandings* that learners will think deeply about throughout the unit. • **Can Explain:** provide thorough, supportable and justifiable accounts of phenomena, facts and data • **Can Interpret:** tell meaningful stories; offer apt translations; provide a revealing historical or personal dimension to ideas and events • **Can Apply:** effectively use and adapt what we know in diverse contexts • **Have perspective:** see and hear points of view through critical eyes and ears; see the big picture • **Can empathize:** find value in what others might find odd, alien, or implausible; perceive sensitively on the basis of prior direct experience • **Have self-knowledge:** perceive the personal style, prejudices, projections, and habits of mind that both shape and impede our own understanding; aware of what we do not understand and why understanding is so hard.
Essential questions	Essential questions help to frame student inquiry and promote critical thinking. The characteristics of essential questions are as follows: • Open-ended questions that resist a simple or single right answer • Deliberately thought-provoking, counterintuitive, and/or controversial • Require learners to draw upon content knowledge and personal experience • Can be revisited throughout the unit to engage students in evolving dialogue and debate • Lead to other essential questions posed by learners
Summative assessment/ **Performance assessment /** **Performance tasks**	The summative assessment is the culminating task that will require learners to draw upon the skills and concepts they have developed throughout the unit in order to demonstrate their understanding. Traditional unit tests (with multiple-choice, true/false, and short answer questions) are often inadequate summative assessments because they rarely require the application of skills and concepts or the demonstration of understanding. **Summative assessments must require the application of skills, concepts, and understandings, rather than a mere reporting of information.** Sometimes these types of summative assessments are called **performance assessments** because they require students to apply skills, concepts, and understandings to a new problem in a different context or to a different text(s). The best summative assessments often incorporate the essential question(s) that the unit addressed, requiring learners to answer one or more of the essential questions drawing upon ideas from personal experience, from the texts studied, and from new text(s) encountered as a part of the assessment. The assessment must be designed while the unit is being planned. To do this, the designer needs to decide what is essential for learners to know and then determine

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	how best the learners will demonstrate their understanding. By designing your assessment early in the planning process the designer will be able to create the best roadmap for the learning experiences /activities required to get to the goal or objective.
Differentiated instruction[1]	Is an educational strategy for addressing student differences, whether they be academic, social and emotional and or cognitive. Differentiation can take place in one or more components of a curriculum unit, namely: • Content • Assessment • Introduction • Teaching strategies • Learning activities • Grouping • Products • Resources • Pacing • Closure In order to design for differentiated instruction, a deep understanding of the following is necessary: • Discipline-based knowledge • Grade level standards • Constructivism • Assessment strategies • Data analysis • Learner profiles • Grouping strategies • Time and classroom management • Broad base of instructional strategies
Backward design	Backward design 'beginning with the end in mind' and is based on the concept that both the learners and teachers will have a firmer and clearer grasp of where the learning is headed if the **goal or summative assessment at the end of the unit is clearly articulated right from the beginning.** Backward design simply means planning the unit with a focus on the enduring understandings that that the teachers want their learners to learn and apply, then identifying the evidences that the learners need to demonstrate to show that they have reached that understanding, and finally, describing the instructional activities and learning experiences to scaffold the learners while they are trying to reach the objective (s). In brief, the steps to backward design are: • Decide on the themes, enduring understandings and essential questions for the unit. • Design a summative assessment for the end of the unit. • Align the unit with BEC Standards and choose outcomes, strategies and best practices to teach them. • Choose a variety of rich, multi-genre resources thematically linked to the unit • Weave back and forth across the curriculum map to make revisions and re-finements.
Scaffolding	Refers to the **chunking skills and concepts and teaching them throughout a unit**; it is temporary assistance to help learners while they are developing independence with the skills and concepts. Knowing what the summative assessment will require of students to do at the end is necessary before teachers can identify the scaffolding

[1] Adapted from Deborah Burns, 'Selecting professional Development Strategies to support a differentiation Initiative', (handout) 2008 ASCD Summer conference on DI, UbD, WWIS, Nashville, Tennessee.

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	learners will require to be successful.

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Introduction: Backward Design

Understanding by Design requires the use of Backward Design. The steps to Backward Design include:

- Decide on the themes, enduring understandings and essential questions for the unit.
- Align the unit with BEC goals and standards and choose outcomes.
- Design a summative assessment for the end of the unit.
- Design the strategies and best practices to teach the enduring understandings and essential questions.
- Choose a variety of rich, multi-genre resources thematically linked to the unit to use in teaching and learning the unit.
- Weave back and forth across the curriculum map to make revisions and refinements.

Stage I. Desired Results

Established goals:

a) What are the relevant content standards, course objectives or learning outcomes that this resource/unit/chapter addresses?

b) How can these content standards or goals be unpacked?

Understandings:

What are the **BIG** ideas that should be covered? What **specific** understandings about these BIG ideas are required? Are there some predictable misunderstandings that could occur? What are these?

Essential Questions:

a) What questions will provoke or foster inquiry, understanding and transfer of learning?

b) What key knowledge and skills will learners acquire from this unit?

Students will know.....

c) What should learners be able to do as a result of acquiring such knowledge and skills?

Students will be able to....

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Stage II. Summative Assessment and Evidences

Performance Task (s)

a) Through what authentic performance tasks will the learners be able to demonstrate the desired understandings and their ability to apply essential skills and concepts?

b) How will the essential questions be incorporated or integrated in the summative assessment to check for each student's understanding?

c) How will the components/elements of the summative assessment be communicated to the learners at the beginning of the unit so learners will know what will be expected and required?

d) What criteria will be used to judge the performance of the desired understandings?

Other Evidences:

a) Through what other evidences (quizzes, tests, observations, projects, journals, etc.) will students demonstrate achievement of the desired results?

b) How will students reflect upon and self assess their learning?

Stage III. Learning Plan

Learning Activities

a) What learning experiences and instruction will enable students to achieve the desired results? The design should indicate activities to:

b) Help the teachers know what the learner' prior knowledge about the topic/subject is.

c) Hook or hold the learners' interest.

d) Equip the learners to explore the key ideas or issues

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e) Provide learners with the opportunities to rethink and revise their understanding and work.

f) Allow learners to evaluate their work and the implications of their work

g) Allow teachers to differentiate the learning activities to meet various ability/interest needs of learners.

h) Help the learners know where the unit is headed and what is expected? (Relate to Performance Tasks).

i) Help teachers organize the learning activities so that initial engagement of learners is sustained and learning is effective.

Tools and Multi-genre Resources

The nature of UbD requires the use of multiple teaching and learning resources. List all websites, specific software and hardware that needs to be used in relation to this resource. Attach all print materials, such as handouts, readings, learning station activity cards, etc.

References

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6.4.5 Learning Guide Template

Exploring the Learning Guide Template

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http://legs.beam.org.ph

Grade/Year:	Subject:	Grading Period:
Unit Title:		Module No:

SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
Meta Data Sheet		This sheet provides an overview of the educational decisions which have informed this Learning Guide. E.g. the BEC competencies, the key literacy words, the teaching strategies to be used.	N/A	N/A	N/A

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SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
Mind Map		This section shows the Unit Name in the middle. Around the name are the concepts or key skills associated with this Module. *Most of these are the BEC Competencies*	N/A	N/A	N/A
Stage 1 ***Activating Prior Learning***		Students get an opportunity to recall what they already know about the topic or how it connects with their own lives in this stage of the Learning Guide.	**Strategy:** **Activity/Activities:** **Amendments to these Activities and Additional Activities:**		

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SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
Stage 2 ***Setting the Context***		This is where you give an **overview** of what the Unit will be about and where this Module fits into the wider scheme. You may introduce some of the key concepts or terms which the students will learn about in the Unit/Module.	**Strategy:** **Activity/Activities:** **Amendments to these Activities and Additional Activities:**		
Stage 3 ***Learning Activity Sequence***		This stage is where students do one or more activities which help them learn the concepts or skills in this Module. There may be a group activity, demonstration, simulation or direct teaching.	**Strategy:** **Activity/Activities:**		

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SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
		This Stage of the Learning Guide may take place over several lessons, depending on the activity/activities	**Amendments to these Activities and Additional Activities:**		
Stage 4 ***Check for Understanding***		Before the students apply what they have learnt to another task/activity, you need to check that they have really understood the concepts, knowledge or can perform the skills taught.	**Strategy:** **Activity/Activities:** **Amendments to these Activities and Additional Activities:**		

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SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
Stage 5 ***Practice and Application***		Students now have the chance to apply their knowledge and skills to another task (either in the lesson or for homework). Through practice, the learning is made stronger. In this section, they may be asked to transfer the knowledge or skill to a new or different learning activity.	**Strategy:** **Activity/Activities:** **Amendments to these Activities and Additional Activities:**		
Stage 6		This is the Module's formal conclusion. You may refocus the students on what has been learnt, what activities were undertaken as well as linking this Module	**Strategy:**		

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SECTION OF THE LEARNING GUIDE	PAGE REF	PURPOSE OF THIS SECTION	LEARNING ACTIVITIES (Name the Learning Strategy and the Activity/Activities and explain what the students will be doing)	TIME NEEDED	MATERIALS NEEDED (From Learning Guide or made by you)
C*losure*		with the next one to come.	**Activity/Activities:** **Amendments to these Activities and Additional Activities:**		

TOTAL TIME FOR THE LEARNING GUIDE	
TOTAL NUMBER OF LESSONS NEEDED TO TEACH THE LEARNING GUIDE	

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6.4.5.1 Lesson Plan Template

This template is reproduced with permission from Basic Education Assistance Scheme to Mindanao. Copyright Republic of the Philippines Department of Education.

http://legs.beam.org.ph

Grade/Year Level: ____ Subject: _____ Date: _____

How Many Lessons will be in this Learning Guide? _____ What Number Lesson is this? _____

Length of Lesson (number of minutes): _____

I. OBJECTIVES OF THE LESSON

At the end of the lesson, the students must be able to:

II. SUBJECT MATTER

Topic:

References: (1) BEAM Learning Guide

(2) Other Sources

Materials:

Key Concept/s to be taught in this Lesson:

Key Vocabulary to be used in this lesson:

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BEAM Stages of Learning to be Used in <u>this</u> lesson: (please check)

Stage 1 – Activating Prior Learning	
Stage 2 – Setting the Context	
Stage 3 – Learning Activity Sequence	
Stage 4 – Check for Understanding	
Stage 5 – Practice and Application	
Stage 6 - Closure	

III. TEACHING/LEARNING PROCEDURES

1. Preparatory Activity

1. Checking of Attendance
2. Reminders

2. Presentation of the Lesson

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3. Lesson Proper

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IV. EVALUATION /ASSESSMENT/APPLICATION

V. ASSIGNMENT

VI. CLOSURE OF THIS LESSON

Teacher's Signature: _____ Principal's Signature: _____

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6.4.6 Professional Development Material Module Template

Module Title:

Project Code:

Requesting party/Client:

Introduction

Provide an overview of the training module.

Competencies addressed

Identify the knowledge and skill areas addressed by this module.

Terminal Performance Objective (TPO)

Write the Terminal Performance Objective for this module.

What is the **T**erminal **P**erformance **O**bjective of this module? The **TPO** should identify (1) the performance of a relevant, attainable, observable and measureable behaviour or task, (2) the conditions and (3) minimally acceptable standards for the performance of the task.

Measurement implies a criterion which can either refer to (a) quantity, (b) quality, (c) efficiency, or (d) durability. The TPO to be technically correct must have a standard using any of the preceding criteria.

The TPO is for a relatively large block of learning content or activities.

The TPO provides direction for the training and forces the trainer to think through the following questions: What should the participant learn at the end of the module? Under what conditions will the trainee perform the task? How well must a trainee perform to be acceptable?

Enabling Objectives (Eos)

Write all the Enabling Objectives to support the TPO of this module.

Enabling Objectives (EOs) are concise statements about trainee performance. They are the stepping blocks to achieving the **TPO.** They typically refer to observable and measureable TASKS BUT do not contain statement of standards. They usually involve a single step in the performance of the TPO.

Content

Activities

Activity 1

Description of activity and expected outputs

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Timeframe

Resources

What resources are required to complete the module?

Presentations

E.G. Overview of LRMDS Systems PowerPoint.

Handouts

Indicate number of pages per print material.

Evaluation Instrument X

Sample Learning Resource Plan

Personnel

Identify the facilitators and other resource persons who will be needed for the training. Indicate the man hours for each.

Facilities, Equipment & Supplies

Indicate the facilities/arrangement, equipment and consumable supplies for each of the activities. For example,

Plenary room for 40 pax-theater style; 1 breakout session room for 20;

LCD projector

Laptops

Internet access

Whiteboards (2)

Paper – 5 reams

Activity 2

Description of activity and expected outputs

Timeframe

Resources

Presentations

Handouts

Personnel

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Facilities, Equipment & Supplies

Activity 3

Description of activity and expected outputs

Timeframe

Resources

Presentations

Handouts

Personnel

Facilities, Equipment & Supplies

Training Assessment

Assessment checklist, questionnaire or activity.

Budget

Itemize the expenditures and the proposed sources for funding the expenditure items.

References

Indicate all the references you have used in this module.

Author, date, Title, subtitle, organization, edition, URL.

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6.5 LRMDS Functional and Technical Specification Template

Functional and Technical Specification for Digital Resources

Project code/name:

Client:

Date:

Prepared by:

Title of resource:

6.5.1 Primary development and output format/s for publication:

For example: PowerPoint, Adobe flash, video;

6.5.2 Learning outcomes and competencies

6.5.3 Summary of learning, teaching or training experience:

6.5.4 Learning, teaching, training pathways and user interactions with content.

Insert a flowchart that provides a visual representation of:

- the learning activities and their flow within this resource
- the paths a user can take to move between screens (or different states of a screen) in this resource

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6.5.5 Describe the overall learning, teaching or training experience, including a summary of specific modules and activities.

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6.5.6 Description of key design features including use of media, audio, video, animation, fonts and style.

6.5.6.1 Generic or global navigation elements

Outline or screen grab to illustrate generic navigation elements.

6.5.6.2 Specific design and function elements

Screen ID	Screen element ID	System or user event	System result	On screen text	Onscreen audio
EXAMPLE					
1	*1a*	*Select start*	*Screen 2 appears*	*Welcome to ….*	*none*
2	*2a*	*Instructions*	*Instructions are listed*	*Instructions:* *1. Look at diagram 1 and identify …* *2. Read the overview of the diagram…*	*none*
2	*2b*	*Select diagram*	*Diagram enlarges to full screen*	*Interactive Labelled Diagram*	*Each labelled term has supporting audio.*
3	*3a*	*Diagram label 3a selected*	*Brief definition of labelled term*	*Carbon dioxide CO2 is found...*	*Carbon dioxide CO2 is found...*

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6.5.7 Additional requirements

Photocopies of quoted material:

All quoted material within a resource script needs to be verified by LRMDS Manager/Production Coordinator. Therefore, please submit photocopies of any quoted content within the script, for example photocopies of extracts from published novels and poems. In the case of published texts, please also provide a photocopy of the imprint page and acknowledgements page from the book.

Any online material should also contain the specific URL that was sourced.

Please ensure that all third-party extracts are listed

Reference list

Copyright statement

All opening pages/screens of this resource will have the following copyright statement:

Contributor details

Subject Matter Expert

Script writer

Editor

Developer

Inventory of Intellectual property:

Sound effects used:

Images:

Video:

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6.6 LRMDS Metadata Template

Project Code:

Client/Requesting party:

Instructions for completing metadata for a resource to be Catalogued and or uploaded to LRMDS repository.

1. The metadata elements describe many different attributes of the resource being catalogued in LRMDS. The metadata is completed by the following personnel:

General metadata: Instructional designer, subject matter experts

Educational metadata: Education/curriculum experts, writers, subject matter experts

Life cycle metadata: LRMDS development and production coordinator

Technical metadata: LRMDS Developer (Desktop publisher/multimedia developer)

Rights Management metadata: Instructional designer, LRMDS development and production coordinator

Meta-metadata: LRMDS development and production coordinator, LRMDS Manager.

Final review and sign off of metadata: LRMDS development and production coordinator, LRMDS Manager.

Category	Element/Item	Element Description	Metadata entry EXAMPLE
General	Identifier	A string or number used to uniquely identify the resource. A globally unique label that identifies this resource. LOM 1.1 DCMI Identifier	Unique identifier that is generated by the system when the metadata is first created..
	Title	The name given to the resource, usually by the creator or publisher DCMI Title LOM1.2 Title	The life and works of Leonardo da Vinci Title including subtitle Leonardo da Vinci: artworks Use sentence case
	Language	The language of the intellectual content of the resource DCMI Language	Filipino English (To be supplemented by a list of languages specific to the Philippines. Also, allow entry of a language not

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			in the list)
	Keywords	Keywords or phrases that describe the resource LOM 1.5 Keyword DCMI Subject	For a mathematics resource modeling strategies for solving arithmetic problems: Counting on Doubling; tens and ones Multiplication Can also contain colloquial terms
	Description	A textual description of the content of the resource, including abstracts in the case of a document or content descriptors in the case of a visual/interactive resource. LOM 1.4 DCMI Description	In this video clip, the life and works of Leonardo da Vinci are briefly presented. The focus is on his artistic production, most notably the Mona Lisa.
	Primary Media	The physical or digital manifestation of the resource (Note CD, DVD are allowed in both Primary Media and Primary Storage Type, as they could feature a range of resources - clarified by the Resource Type field in Educational category) DCMI Format	CD, DVD, Video Textbook Wall Chart Poster Model Worksheet Flashcards Interactive Lesson Manipulative Other: *specify*
	Primary Storage type	The primary format in which the resource is stored	Digital, Print, Web Based, VCR, VCD, CD, DVD, Audiocassette.
	Accompanying Item	A known relationship between two items DCMI requires LOM 7 Relation	Manual Flash cards Maps Video Include catalogue identifier for all accompanying items that are catalogued.
	Related LR	Other catalogued LR/TR/PDM that are related to this resource.	Other catalogued LR/TR/PDM that are related to this resource

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		List of Relation, ID, description. Structure where: **Relation** is one of: *ispartof* *haspart* *isversionof* *hasversion* *isformatof* *hasformat* *references* *isreferencedby* *isbasedon* *isbasisfor* *requires* *isrequiredby* **ID** Identifier of a catalogue entry **Description** Free text description of the related resource	*ispartof* LR405 Leonardo da Vinci: artworks is an accompanying text of The life and works of Leonardo da Vinci
	Resource location	If the resource must be obtained externally: Details of where the resource can be obtained Structured: Name/Co. Name/Resource Person, Address, URL, email etc DCMI Location	Name: Company, Organization, Institution Name: Resource Person Address: URL: Email: Phone:
	External Resource Identifier	A unique identifier for the resource if it is not in the repository. Typically will be an ISBN number, though there may be other possibilities. (Note: This field may be left blank even for a non repository resource,	ISBN URL

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		if such an identifier is not available, not known)	
	Publication Date	For externally produced resources this is the actual publication date (not the date it was catalogued) For LRMDS produced resources it is automatically set to the date at which the resource was published (from Life Cycle) DCMI Issued	
Life cycle	Contributors	Structured: Name, City, Country, URL OR Structured: Name, Position in LRMDS, DepED Administrative Unit, email address (Represents the affiliation of the publisher or contributor, for an LRMDS created resource only) LOM 2.3 Contribute	
	Role	Publisher, Author, Editor, Writer, Subject Matter Expert, Instructional Designer, Editor, Consultant, Other: <data entry> (NB Publisher here refers to the LRMDS operative who actually added the final version of the resource to the catalogue - i.e. marked the Workflow Status as Published) LOM 2.3.1 Role	
	Date of Cataloguing/Current Workflow Stage Date	Year (MM/DDYYYY) – (the date is date of cataloguing of final version, i.e. when *Workflow Status* = *Published*. If the *Workflow Status* is *not Published*, it represents the date on which the resource entered the currently indicated *Workflow Status*)	

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	Workflow status	Workflow Values: Draft, Review, Final, Published.	
	Version	Integer The cataloguer of a resource (complete or partially complete can increment this number).	
Technical	File Format (for digital resources)	The data format of the resource, used to identify the software and possibly hardware that might be needed to display or operate the resource. Not mutually exclusive: *Microsoft Word* *Microsoft PowerPoint* *Microsoft Excel* *OpenOffice Writer* *OpenOffice Calc* *OpenOffice Impress* *Executable (exe)* *PDF* *<Video file types>* *<Animation file types>* *<Image file types>* *Web-Based* DCMI format LOM 4.4 Technical Requirement	
	File Size	File size in MB (allow integer or real, e.g. 2, 3.5) Maximum allowable file size is 5 (MB) The value is automatically entered by the system for resources being uploaded.	E.G 2.3Mb
	Special Requirements OS	Free text entry of Operating System(s) that are the only ones on which this resource will run DCMI format LOM 4.4 Technical Requirement	Refer to LRMDS Technical specifications

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	Special Requirements SW	Free text entry of Application Software Packages that are required to run this resource that and are not listed in the technical specifications DCMI format LOM 4.4 Technical Requirement	Refer to LRMDS Technical specifications
	Special Requirements AS	Free text entry of additional software (such as plug ins) that are required to run this resource and are not listed in the technical specifications DCMI format LOM 4.4 Technical Requirement	Refer to LRMDS Technical specifications
	No. of Pages	The size in number of pages of the resource. Non digital resources only (where relevant) DCMI Extent	455pp
Educational	Education Type	The Skills for the basic education depend on the following sequence of choices: Type (Pre School, Elementary, Secondary, ALS, etc) Professional Development	Elementary
	Grade/Personnel Level	The target audience the resource is intended for: Choice for selection depends on Choice of *Type* (A two-option main menu with sub menus, one for school grades and one for PD levels) LOM 5.5 Educational Intended End User	For learning material for schools, this is grade/level: Pre School, Grades 1-6, Year I-IV, ALS: sub-list (Basic, Elementary, Secondary) For PD this would be level of learner: Principal Teacher Trainer Pre-service DepED staff
	Curriculum area	A standardized list of curriculum	

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		areas. English, Filipino, Science, Mathematics, Technology and Livelihood Education, Values Education, Makabayan, Alternative Learning System, Araling Panlipun Specific lists provided depends on Grade/Level selection. LOM 9.1 Classification Purpose.	
	Discipline/subject	A standardized list of subject areas within each curriculum area. Biology, physics, chemistry, physics, earth science, (This list will be completed for all of the disciplines covered in the curriculum areas.) LOM 9.1 Classification Purpose	Biology, physics, chemistry, physics, earth science, (This list will be provided for all of the disciplines covered in the curriculum areas on choice of *Curriculum Area*)
	Coverage: Topic / Sub topic	This list will be provided for all of the disciplines covered in the curriculum areas and depends on *Discipline/Subject* selected above.	
	Related Topics	In addition to Topic/Sub topic.	
	Objectives	Primary teaching, learning or training objectives of the resource. LOM 9.1 Classification Purpose	
	Skills	See Subject. Each set of skills will be of the following form: Strand S1 Competency C1 Sub-competency C1.n Measurable outcome that the user can be expected to achieve after using the resource. (What the user will know and be able to do) A three-option main menu, with sub menus, one listing DepED BEC	E.G. S1 Basic Processes in Science C1. Relate how science and technology affect.... C1.1 Give examples of Science and Technology activities.... C2.

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		approved curriculum competencies, one listing NCBTS competencies, one listing competencies for non teaching DepED staff. LOM 9 Classification Purpose	
	Duration	Days/Hours/Minutes potentially required to use the resource. (any combination can be specified, any or all can be left blank: because it is not always meaningful to attribute a duration to all learning resources) DCMI coverage LOM 5.9	
	Intended user (“audience”)	Educators Learners Not mutually exclusive (suggest two check boxes) Other (free text entry) LOM 5.6 Educational context	
	Accessibility	From the following (not mutually exclusive) list Gifted Hearing Impaired Visually Impaired Device independence Cognitively Impaired SARDO (Students at risk) LOM 9 Classification 9.1 Purpose “ accessibility restrictions”	
	Primary Educational Use	Learning Materials	

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		Teacher-Professional Training Development Material: Lesson Plan / Guide Learning Guide Learning Module Full course Assessment/Tests (not exhaustive - more to be added) LOM 5.2 Resource type	
Rights	Copyright	Y/N Option Y/N DCMI 1.1 Rights	
	Copyright Owner	Structure: Name/Company Name, Address, email, URL	
	Acquisition	Option Free / Commercial LOM 6.1 Cost	
	Conditions of Use	Full [user has full rights for resource - includes modify, making derivatives] Modify Derive	Refer to Intellectual Property Rights.

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		Reproduce Use Copy [Download/Print] Print only [Print but not distribute] For offline resources, if rights are unknown value is: *Refer to Publisher* (See General category for publisher contact details. LOM 6.3 Rights description DCMI 1.1 Rights	
Meta- Metadata	Identifier	A globally unique label that identifies this metadata record LOM 3.1	
	Catalog	The name or designator of the identification or cataloging scheme for this entry. LOM 3.1.1	
	Entry	Actual string value of the entry. LOM 3.1.2	
	Contribute	Those entities that have affected the state of this metadata instance during its life cycle. Includes Role; Entity; Date LOM 3.2	
	Metadata scheme	The name and version of the authoritative specification used to create this metadata instance. LOM 3.3	
	Language	Language of this metadata instance.	

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		This is the default language for all language strings. LOM 3.4 ISO 639 language code	

References:

[IEEE 1484.12.1-2002] IEEE LOM: Draft Standard for Learning Object Metadata. This standard defines a structure for interoperable descriptions of learning content. http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf

Dublin Core Metadata Initiative Library Application Profile http://www.dublincore.org/documents/library-application-profile/

The Learning Federation, 2008, ANZ-LOM Metadata Application Profile V1.01 www.thelearningfederation.edu.au/metadata

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6.7 LRMDS Reporting Template

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Quality Assurance Review Event

Request Brief	Design Brief	Instructional Design	Alpha version/Prototype
Beta	Editorial	Conformance	Publish
Other			

Type of Resource (Please check):

	CD-ROM		VCD		DVD		VHS		Slides
	Transparencies		Cassette tape		Digital interactive		Other s (please indicate)		Print

Reviews: For each Quality Assurance Review the review findings should be summarized and all completed Evaluation forms attached or filed with this Report.

For many of the QA reviews there will a number of different reviews. E.G. An educational and technical reviews of a beta version of a digital resource. List all review types for the QA event.

Date and Review type	Reviewer	Issue	Suggested Action	Status (Open or Closed)

Recommendation

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7 Guidelines and Evaluation Instruments

7.1 Instructional Design Guidelines

7.1.1 Overview

Instructional design is the practice of creating instructional and learning tools for achievement of learning. It requires clearly identifying the learning and teaching goals, objectives, teaching and learning strategies and assessment requirements for the resource.

The overall design of instruction will vary according to the intended use and user of the resource. What is most important is the actual process which usually includes a number of reviews and evaluations as the design of the learning resource is being developed. The LRMDS Development and Production system achieves this via a four step design, development and quality assurance process. It is an iterative process, with each quality assurance review by experts and or users assisting to improve the design and overall quality of the resource.

1. Determine learning needs and objectives – Design Brief

   Review and revise

2. Design the learning – Prototype

   Review and revise

3. Develop - Beta

   Review and revise

4. Test - Conformance

LRMDS Approach to Instructional Design

A Request Brief is produced to describe the primary learning and teaching resource need. A Request Brief is a written explanation - given to the development and production team by a requesting party or client to describe the specific service required and the general design requirements of the resource to be developed or produced.

The Request Brief is used to create the Design Brief is developed by a multi-disciplinary team. This requires curriculum and subject matter experts to work on a Design Brief and for writers to be engaged to work with the Instructional Designer to develop the content of the resource.

The Design Brief defines the key educational concepts, intended learning outcomes, competencies and describes the pedagogical approach to learning and the types of learning and or teaching activities. It also describes the intended resource output format and media types and whether it will be a predominantly print based resource, digital and levels of interactivity.

The Request Brief and the Design Brief provide the broad framework for the design and development of the resource. These documents describe the focus for development in terms of:

- pedagogy – the approach to teaching and learning, including the intended learning strategies for the specified learner activity and learners
- domain and discipline – the knowledge, skills and processes to be covered, along with key ideas in terms of opportunity for experiencing the ways of knowing, representing, expressing and doing within the domain or discipline
- learner profiles – the cognitive, physical and environmental attributes of the target ‘audience’.

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The Instructional Design Guidelines and templates are used to describe and illustrate the overall design of the resource. Once approved the Functional and Technical Specification is developed to describe the overall user experience, navigation, representation of all content and development media.
Section 5.3 describes the Design and Development process in more detail.

Educational Quality

The LRMDS Educational Soundness Specification (Refer to Section 9.1) underpins the development of teaching, learning and professional development resources and is reflected in the Design Brief. The specification has four principles.

Integrity

This principle recognizes that the integrity of the content is a critical component of educational soundness. Integrity will be achieved when the content is authentic and when the learning resource design takes account of:

- the ways knowledge is conceptualized within the domain
- the skills and competencies of the domain
- the ways of communicating both within and outside the domain

and is inclusive of the knowledge and understandings valued by various user groups and communities.

Learner Focus

This principle recognizes that the learner is central to the concept of educational soundness.

- The design of digital and non-digital learning, teaching and professional development resources will respond to a detailed profile of the users for whom the material is intended. This profile is derived from relevant school demographics and educational data.

- The design will recognise that no two students learn in the same way. Across and within the same profile group, learners vary greatly in the ways they communicate (see, hear, speak, move), relate, think, behave, experience, feel, act, reflect, create, engage and remember.

- The design recognises cognitive development, diversity of learning, application to real world situation, multiple intelligences, constructivism and tele-collaborative, collaborative and cooperative learning

Resources will be considered to have learner focus when it has purpose, meaning and relevance for the learners and it:

- Makes explicit the intended process(es) of learning
- Enables learners to interact with, organise, represent, interpret and manage the process of learning and the information flow
- Contextualises student learning by making connections with prior learning and likely future learning through virtual and physical/face-to-face modalities

Usability

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This principle recognises that usability in the educational context is fundamental. Usability means that the learning or teaching resource:

- is relevant in terms of the curriculum
- supports the process of learning
- recognises the importance of feedback mechanism as a means of monitoring progress
- enhances the ability of the learner to engage with its content.

Accessibility

This principle recognises the range of contexts in which teaching and learning take place and the diversity of teacher and student populations.

The LR/TR/PDM is designed, developed, evaluated and delivered so that users have access to educationally sound content regardless of age, socioeconomic status, race, culture, disability, gender or geographic location.

7.1.2 Pedagogical approach

Understanding by Design (UBD)

DepED is revising the Secondary Education Curriculum. The 2010 Secondary Education Curriculum (2010 SEC) is a refinement of the Secondary Education Curriculum under the 2002 Basic Education Curriculum (2002 BEC).

Rationale

- There are gross inconsistencies between means and ends.
- Several factors constrain teachers from playing their role as facilitators of the learning process.
- Teachers have limited knowledge of constructivism as a learning theory.
- Teachers are divided on how to teach values.
- Students have difficulties using English as a tool for facilitating learning.
- There is apparent disconnect between what is taught and what is tested.

(*DepED The 2010 Secondary Education Curriculum, Draft as of October 17, 2008*)

> Within the DRAFT 2010 Secondary Education Curriculum is an emphasis and adoption of Grant Wiggins and Jay McTighe, Understanding by Design (UbD): a framework for improving student achievement. “Emphasizing the teacher's critical role as a designer of student learning, UbD works within the standards-driven curriculum to help teachers clarify learning goals, devise revealing assessments of student understanding, and craft effective and engaging learning activities.”
> *Understanding by Design* http://www.grantwiggins.org/ubd.html

Understanding by Design is based on the following key ideas:

- A primary goal of education should be the development and deepening of student understanding.
- Students reveal their understanding most effectively when they are provided with complex, authentic opportunities to explain, interpret, apply, shift perspective, empathize, and self-

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assess. When applied to complex tasks, these "six facets" provide a conceptual lens through which teachers can better assess student understanding.

- Effective curriculum development reflects a three-stage design process called "backward design" that delays the planning of classroom activities until goals have been clarified and assessments designed. This process helps to avoid the twin problems of "textbook coverage" and "activity-oriented" teaching, in which no clear priorities and purposes are apparent.
- Student and school performance gains are achieved through regular reviews of results (achievement data and student work) followed by targeted adjustments to curriculum and instruction. Teachers become most effective when they seek feedback from students and their peers and use that feedback to adjust approaches to design and teaching.
- Teachers, schools, and districts benefit by "working smarter" through the collaborative design, sharing, and peer review of units of study.

Constructivism

This excerpt from TLF *Considerations for Learning Design* (p4-6) has been reproduced with permission and provides an overview of constructivist learning principles and approaches.

Constructivism asserts that we learn through a continual process of constructing, interpreting and modifying our own representations of reality based on our experiences with reality (Jonassen, 1994).

Constructivist learning requires changes to learners' experiences. The learning objects need to help students understand concepts for themselves. This can be achieved by designing learning activities in which students solve new problems, research and integrate information, and create knowledge for themselves.

Constructivism is about challenging ideas. In conjunction with an inquiry- or problem-based approach, this type of pedagogy is invaluable in moving students to a more formal understanding of a particular concept, or way of knowing and doing.

Problem based learning

In *Learning to Solve Problems*, Jonassen (2004, p 2) states 'Content, the coin of the education realm, is relatively meaningless outside the context of a problem'. Learning is an active process and the underlying premise of problem-based learning is that one learns more by actually doing rather than being told how to do it (Harper & Hedberg, 1997). Jonassen (2004, pp 3–6) describes problems as 'varying intellectually in terms of structure, complexity, dynamicity, domain specificity or abstractness'. Obviously, the processes applied to solving the problems will also vary. The extensive problem typology provided by Jonassen comprehensively describes the many varied problem types including: puzzles, algorithms, story problems, rule-using problems, decision making, trouble shooting and diagnosis-solution problems to name just a few that can be designed for the digital environment within a constructivist framework.

Inquiry-based and investigative learning

Inquiry processes should be embedded into the learning objects. We know from research into the ways children learn that students who can ask good questions and investigate the solution to problems have a much deeper understanding. Through experience with inquiry, students learn

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how to examine critically any given question and come to master fixed subject matter through this process.

Starting with the prior knowledge and experience of students, learning objects should be designed to promote:

- framing and focusing questions
- locating, organising and analysing information and evidence
- evaluating, synthesising and reporting conclusions.

The sequencing of activities and the related scaffolding should be designed to stimulate learners towards achieving different 'states' of inquiry:

- thoughtful
- motivational and active
- independent and autonomous
- reflective (providing points for critical reflection and self assessment)
- hypothesizing (applying inquiry to hypothetical issues).
- Authentic, situated contexts for learning

The learning experiences must be at the appropriate level for the users. The experiences need to be challenging enough but based on a good estimate of the users' previous understanding of the concepts so that all students in the profile can extend their understanding.

7.1.3 Key learning and instructional design principles

Instructional goals and learning purpose and objectives are explicit

The learning purpose and intent must be made explicit to the user. This should be evident within the expression of the task and or context for learning being set. The output or outcomes from a learning or teaching resource should reflect the learning purpose of the resource and be dependent on user input or participation.

Suitability for varied teaching and learning styles and settings

The resource uses a range of approaches and is flexible in their application (encourages cooperative learning, experiential learning and collaborative teaching)

The resource encourages the use of a variety of learning styles and modes: concrete, abstract, oral, written, aural, visual and multi-sensory to support meaning making and provides explicit aides for retention)

Learner engagement

Engagement results from stimulating an emotional reaction and thereby motivating the user to participate. This is often best achieved by providing the user with a role that is central to the learning activity and authentic context. The user should be required to actively do something – manipulate the data and information – the key to connecting the learning activity and the context.

There is another component to engagement: the learning experiences must be at the appropriate level for the users. The experiences need to be challenging enough but based on a good estimate of the previous understanding of the concepts so that all students in the profile can extend their understanding.

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For print based resources: Focusing techniques and cueing devices such as variations in typeface, boxes, underlining; diagrammatic or pictorial presentations and spacing can attract attention and encourage reflection.

For interactive resources: Graphic visualisation of ideas and phenomena can attract attention, aid retention, enhance understanding or create context, and can often do a lot more than simply explain content.

Promotes active and critical learning

Higher order thinking skills are required including research skills, problem solving, group decision making. The user assumes increased responsibility for learning.

Comprehension and application of the content knowledge requires cognitive effort and not just chance selection of responses.

The learning activities include one or more of the 6 facets of learning (explain, interpret, apply, have perspective, empathize and have self knowledge)

Promotes communication skills

There are activities that encourage self expression and interaction with peers. For example, debate, poster displays, construction, small group discussions and pamphlet or report writing.

Encourages creativity

Activities require the user to make unique interpretations or solutions.

Independent learning

The user has some control over the rate and difficulty of presentation of the content or tasks to be completed. For example, explore rather than be locked in to a linear sequence, check for mastery at appropriate points, vary the amount of material and time for problem-solving or task completion.

Collaborative learning

Activities encourage group based learning including cross-ability groups and development of specialist expertise for sharing within a group based task.

Materials are well organised and structures

The order in which the content is presented is logical and suited to the subject area. Tasks and activities are clearly defined and information is suitable for a diverse range of abilities and achievement levels.

Overview charts and graphics and other visual organizers are used for larger learning and teaching resources, e.g. units of work.

Concepts are clearly introduced, developed, summarized

The learning outcomes – a statement about what the user will know and be able to do – underpin all descriptions of the learning activity and therefore the resultant learning design. Importantly, evaluation of content with users is based on the specified learning outcomes and the associated skills, knowledge and process understandings and applications inherent within them.

Non-technical and technical vocabulary is appropriate

Use of language is appropriate for the target user age and stage of learning.

Vocabulary used is suitable/ appropriate to the target users' level.

New or complex words and terms are clearly and consistently explained or defined.

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Consider the amount of technical vocabulary use and the devices used to interpret, explain and define technical terms

Consider the general level of difficulty and density of non-technical words used in terms of familiarity and abstractness.

Technical terms are consistently explained

Consistent presentation of new terms as they are introduced (boldface typeface, illustrative examples)

Support is provided by way of glossaries or post activity summaries.

Pedagogy is innovative

The resource uses strategies for teaching and learning to promote interest and support deep learning and understanding of concepts and skills. Imagery, layout, presentation, pace, topics and overall instructional design motivates the learner to engage with the material and activities through some level of emotional appeal.

Constructivist approaches

- create new ways for users to visualise and 'notice' processes and phenomena and to manipulate objects and data
- allow users to build on their current understandings and to construct new understandings of the world
- provide a scaffold for learning that points users towards better ways of understanding and representing knowledge (feedback and correctives)
- provide constructive scaffolded feedback throughout the learning experience to support users in recognising and correcting common misconceptions
- allow different users to use (and develop) different strategies, such as risk taking and risk avoidance
- help learners become more aware of their own thinking processes and learning – through using meta-cognitive strategies.

Scaffolded feedback

Feedback can be implicit or explicit, but should always be contextual, immediate and logical, and appropriate to the needs of the user to 'cognitively' know and understand the strategy, process or convention to be applied to make meaning.

Based on the intended pedagogical approach to learning, the learning resource should:

- provide students with the capacity to interrogate and manipulate the data and information presented, and require active and meaningful expression – with constructive feedback related to user selections and expressions (Piaget's emphasis on activity: children should receive feedback from their own actions)
- not make excessive demands on student memory – the memory factor of a task must be taken into consideration (especially for younger learners), and relevant information should be available (inline) within the task when required to assist students in scaffolding their understanding
- have the potential to introduce 'memorising' devices, triggers etc (with appropriate challenge levels) as intellectual tools for future learning application that students could use elsewhere
- provide students with alternative paths through the learning activity – this is often most effective when connected to feedback flows
- use feedback as a mechanism for delivering the content.

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Adequate and appropriate pre and post teaching activities

The material includes activities outside the main body of the lessons that serve to reiterate, provide for practice and extension of the stated learning objectives.

Adequate and appropriate evaluation tools

The learning purpose and intent is made explicit to the learner. This should be evident within the expression of the task and or context for learning being set. The output from a learning resource activity should reflect the learning purpose and be dependent on the student input.

The learning outcomes or essential learning is explicit – a statement about *what the student will know and be able to do* – underpin all descriptions of learning activity and therefore the resultant learning design. Importantly, evaluation of content with users is based on the specified learning outcomes and the associated skills, knowledge and process understandings and applications inherent within them.

7.1.4 Social Content Guidelines

Adapted from: DepED 2008, Regional Handbook in the Content Evaluation of Supplementary Materials. IMCS.

DepEd has produced the following guidelines to support design, development and evaluation of instructional materials.

Purpose:

To ensure that text, art, and photos / illustrations of textbooks and teacher's manuals and other instructional materials teach social values as well as Government's educational thrusts, the following guidelines on social content are prescribed:

The Nation and Citizenship

- Treat national symbols and institutions with respect.
- Foster obedience to and respect for the Constitution and the law.
- Encourage participative and responsible citizenship (e.g., depicting individual initiative rather than overdependence on organized government aids and dole-outs).
- Avoid any bias favoring foreign products, practices, and values.
- Use illustrations and photographs of Philippine communities, objects, animals, and people.
- Show Filipino technology, games, dances, dress, food, festivals, celebrations, and customs.

Society

- Depict contributions of men and women, ethnic and cultural groups in economic and social progress.
- Foster attitudes of tolerance, understanding, and appreciation of the diverse sectors and groups in society.
- Present a balanced rural and urban society.
- Give example of lifestyles or situations existing outside Metro Manila. Use both rural and urban situations without stereotyping either.
- Avoid comparisons which may be divisive to social classes, cultural, or religious groups.

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- Show respect for different family patterns (nuclear, extended, single parent or two parents).
- Promote and respect the rights of children, elderly, differently able, and other vulnerable sectors of society.
- Refrain from devoting space and attention to fads or transitory personages and events, untested theories or views.
- Promote the need for the high ethical standards and codes of behavior and their observance in all aspects of Philippine society.
- Do not depict physical, sexual, and mental abuse of adults and children as well as violent sports and entertainment.
- Do not give situations that would encourage crime, violence, and vices.
- Avoid materials that malign people, promote violation of laws and matters contrary to law and morality.

Race, Ethnicity, and Culture

- Respect racial, ethnic, and cultural diversity in our society.
- Avoid bias and stereotypes in reference to any individual or groups.
- Avoid inaccurate, unnecessary, or inappropriate portrayal of or reference to racial/ethnic or cultural customs, symbols, observances, festivals, dress, names, or language.

Religion

- Use religious references, symbols, celebrations, and language (in the text, illustrations, and photographs) only when appropriate to the subject matter.
- Ensure that any appropriate references to religious groups are accurate and authentic within the setting and/or period of history presented.

Role Models

- Avoid sex bias; stereotyping of male and female roles.
- Portray husbands and wives as partners in homemaking and family management
- As much as possible avoid choice of living persons as role models, except for persons of exceptional and acknowledged accomplishment or virtue regardless of their racial, ethnic, or cultural origin or affiliation.
- Refrain from glorifying or unduly extolling persons and their accomplishments.
- Present a balanced picture of roles of workers and managers.
- Show good role models of public servants such as police officers, soldiers, and government officials instead of caricaturing or ridiculing them.
- Show workers who contribute to Philippine development.

Gender

- Avoid sexist language, bias, and stereotyping of males and females as to professions, occupations, contributions to society, and home and family roles and behaviours.
- Do not differentiate either explicitly or implicitly between the capability of males and females to contribute to the political, economic, or social well-being of Philippine society or the world.

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- Maintain balance in treatment of gender roles, occupations, and contributions in the text and illustrations.

Population

- Promote responsible parenthood and shared decision-making in various areas of home life (e.g., family planning, family financing, education of the children, etc.)

Health and Safety

- Promote physical and mental well-being of males and females, children and adults.
- Discourage use of tobacco, alcohol, narcotics, and restricted drugs.
- Avoid depicting enjoyment of junk food.
- Promote health and safety standards and precautions.

Environment

- Portray efforts to conserve the country's natural resources and protect the quality of the environment.
- Promote personal and community involvement in environmental management for sustainable development.

Others

- Avoid commercial brand names and corporate logos.
- Encourage humane treatment of animals and respect for life of all kinds (including plants).

7.1.5 Media Specific requirements

Whether a resource is developed using one or multi-media formats the design should take full advantage of the unique aspects of the medium. Consider whether the subject matter and learning purpose is best handled by the selected type of media. This is a critical consideration for video and digital resources but is also true for the instructional design and presentation of content in print based resources.

7.1.5.1 Print based resources

Readability of text

A number of factors affect the readability of text. For children's materials, the key factors are:

- choice of typeface
- type size
- line spacing (leading)
- line length.

Typeface and fonts affect the readability of text based content. In general be consistent with the character size and typeface use for the main body text, captions, indices and diagrams. Hierarchy of information and the relationship between ideas should be clearly communicated through effective use of contrasting print size and style. Font variations should only be used as a cueing device, not just to be artistic.

Use sans serif fonts: Sans serif fonts

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In print, sans serif fonts are more typically used for headlines than in body text. However, they are the defacto standard for body text on screen. Given that many resources will be viewed and read via a computer screen (word or pdf) as well as printed it is preferable to use sans serif fonts for text based documents.

Spelling and grammar

For spelling and grammar support refer to the following:

English and Spanish

Meriam-Webster Dictionary and Thesaurus. http://www.merriam-webster.com/

Filipino/Tagalog

Multilingual Books: Online Dictionaries From Around The World!

http://www.multilingualbooks.com/onlinedicts-tagalog.html
Presented here is a collection of pages with links to online dictionaries in languages from all over the world, including monolingual online dictionaries, bilingual online dictionaries, online technical and specialty dictionaries, and online translation engines and hyper-dictionaries. We provide these links for scholars, students, and language-learners to help in their quest to pin down that word, meaning, or phrase that eludes them, and to further their knowledge of their secondary (or perhaps primary) language.

Tagalog Dictionary http://www.tagalog-dictionary.com/

This site is designed primarily for learners of **Filipino**/**Tagalog** language. It deals with general vocabulary of more than 1,000 words & phrases for quick access to meanings. Sufficient enough to meet many of the reference needs of students, writers, & professionals. The researchers are still working for more depth words and phrases and are accepting word contributions for the growth and completeness of this project.

Spacing

Ensure that there is enough white space between blocks of texts and in line tables, diagrams and images.

Visual design

Graphics and use of color will enhance interest in the material. The materials should be visually clear with good visual contrast.

In packages containing many parts or components color coding and number sequencing can be effective. However, if it is likely that the content is to be locally reproduced (photocopied) for classroom use then color coding will not be as easily rendered on a black and white reproduction.

Always test the print and photocopy of the final printed material.

Illustrations, pictures and diagrams

Illustrations, pictures and diagrams assist to focus the attention on important content areas and should be used for this purpose. Visuals should not be dark or cluttered or have competing elements.

Packaging

The quality of the paper, packaging or binding should be appropriate for the intended use and expected life.

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Organization of the package should maximize easy access. For example student and teacher material can be easily separated. The overall size and weight of the package is appropriate for classroom use and for the intended age of the user.

7.1.5.2 Video based resources

Adapted from British Columbia Ministry of Education, 2002, Evaluating Selecting and Managing Learning Resources: A Guide

Video extends or build upon users' knowledge

Video should be targeted at the appropriate age and stage of learning for the audience. Any background knowledge required to understand the video content should be common knowledge or previously learned content.

Sequencing and chunking allows for appropriate contextual pauses in viewing

Videos that cover a range of concepts and topics require a level of organization that is logical to the user. "Chunking" the information assists the user to mentally organize the topics. Where the video consists of a lot of concepts ideally a menu is provided to allow the user to select starting and finishing points.

Adequate/appropriate pre and post viewing activities are suggested in the support material

Pre-viewing materials are effective when they connect to users knowledge and help them to comprehend the concepts and ideas that are highlighted in the video. Post –viewing activities and materials should extend and consolidate learning.

Volume and quality of sound

Narration and voice over should be audible over background sound.

Narration

The narration should be effective and appropriate to instructional purposes (pacing, clarity, gender). The voice should carry an authoritative tone without being patronizing. Narration should be synchronized with visuals.

Music and Sound effects

Sound tracks and effects should be used to enhance the effectiveness of the message.

7.1.5.3 Digital Resources

Digital learning resources should exploit the opportunities provided by ICT to enhance learning and teaching. In particular, they may do this by:

- offering clear benefits over non-ICT resources
- providing appropriate educational stimulus and feedback
- offering tasks that challenge targeted learners appropriately
- enabling collaborative work, where appropriate
- enabling practitioners to exploit, adapt and differentiate resources to meet specific needs
- supporting learners in selecting their own route through the digital learning resource, where appropriate
- supporting the user in customising the resource

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- using an appropriate mix of media for the learning objective (for example graphics, animation, photographs, video, sound) to engage the learner with the educational purposes
- providing record-keeping facilities for the practitioner and learner, where appropriate
- taking advantage of any specific opportunities offered by the platform used (for example PDA, tablet PC, mobile).

BECTA 2006, *Quality principle for digital learning resources.* Content Directorate. http://www.becta.org.uk

7.1.5.4 Interface and information design for digital resources

The following interface and information design guidelines are adapted with permission from TLF, 2004 *Considerations for Learning Design*, Curriculum Corporation, Australia.

The instructional value of illustration cannot be overlooked. Graphic visualisation of ideas and phenomena can attract attention, aid retention, enhance understanding or create context, and can often do a lot more than simply explain content.

Context can be provided through the user interface thereby gaining the attention of students which is a precondition to any kind of learning (Gagné & Briggs, 1979). Sometimes the simplest design can be the most stimulating and motivating, providing cognitive stimulation versus aesthetic appeal. Think about the many times you witness a child opening a present from within a box – and then playing with the box.

Interface design should also be user-centred, that is, it should reflect and relate in terms of imagery that is associated with the life experiences and interactions of the age group. When considering the user experience, interface designers should also recognise the following requirements.

Users should not have to expend cognitive effort thinking about how to interact with the learning resource and should be able to focus on content.

Graphics should be sophisticated – careful visual design is essential. 'Schooley' levels of imagery should be avoided.

Entry screens into learning resources and transition screens need to be intuitive. Designers should consider ways of generating system prompts for the user.

It should not be possible for users to navigate through the resource using random button selection or other strategies that do not require engaging with the learning purpose of the resource.

Users should be provided with a means of returning to the start of the activity (bypassing instructions and examples), and another means of returning to the start of the resource.

Users should have the choice of navigating using a mouse or through the keypad.

Text

Onscreen text should be minimal in most instances. However, where text is required, consider the following points.

Text instruction within the learning resource should be limited to single sentences, dot points or short paragraphs, and be accessible in a context-sensitive manner. Where text is important, the interaction design should require the user to 'read' it in order to proceed.

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It is essential that content information required for users to structure their thinking about the concept or ideas being presented – for example, the background information about a particular chemical reaction – be placed at the relevant point in the activity. Hint screens to scaffold learning add to the immediacy of feedback, but should be contextualised with the content being explored.

Text materials in the body of the learning resource should be restricted to information required for completing the activity.

Where text is required for initial instruction, it should be no more than a paragraph. Most users either do not read or do not retain this information. Navigational instructions if required are more useful to users while they are navigating, and therefore remaining in line with the content.

In most circumstances text input boxes are not appropriate and, if used, should result in some material change in the behaviour of the object. While taking notes for reflective purposes is useful and can be meaningful, the challenge is to create enough flexibility for data entry, alongside assistive prompts or hints, to make it meaningful. Premeditated 'canned' data can work effectively as models for meaning making and considered interpretations and expressions.

Where user input is desired it should be editable. It should be possible for users to reflect on their previous work and modify their data input throughout the learning process when new information becomes available to them. It should also be possible to navigate easily through the program without losing data.

Audio

Audio within digital learning resources is generally required to provide:

- sound and or atmospheric effects consistent with the context for learning
- an authentic 'voice
- literacy and language support.

Judicious consideration of the amount of audio required to ensure engaged and effective learning needs to be balanced with alternative means of representing the same information. For example, would a visual clue or representation be just as effective? 'Read to me' text may be required in resources for early years' learners and or literacy and language learning resources. However, visualisation of data and information through animation is preferable. Where audio is used it must be possible for the user to directly control the audio, that is, they can turn it on or off and can replay it.

Sound files should be used for effects in ways that promote the learning purpose and context and that help to situate the learner. However, sound must not be the only means of communicating information.

Learning resources should not have any global controls for sound. The user must be able to control, that is activate and deactivate, each and every instance of sound in line with the screen information they are interacting with.

'Read to me' and instructional audio should be limited to early years' (and some Literacy and language) learning resources and be complemented with visual representation. This might take the form of short sentences or text labels on a diagram, animation or picture.

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Graphics and animation

Navigation in learning resources should use intuitive graphics rather than text wherever possible. Interface and information design should focus on the use of space and movement to enhance visual learning.

Good quality graphics and animations should be used in preference to photographs. Photographic realism is important within certain contexts but does not necessarily always require the use of a photograph. However, it is important to ensure that the simplification of graphics to reduce information or file size does not reduce the value of the graphics for learning within the resource.

Graphic output should be supported by text (or numbers) rather than the reverse wherever possible.

The sophistication and nature of graphics should reflect the age of the users who would engage with the content.

Illustrations also have an instructional role – they aid retention and provide interest and an alternative mode of representation instead of text: 'picture says a thousand words'. Illustrations can provide visual clues and stimuli that users are not able to generate on their own.

Good quality animations should be used in preference to video clips. If necessary, the animations could be supported by photographs.

Animations require user control – start, stop and replay – or at least, if it is important for the animation to play automatically, that once it has played the user can replay and stop at their leisure.

Animations should be used to illustrate processes rather than simply replace text, and vivid clear color used in graphics for younger children.

Humor should be encouraged. Most learners enjoy quirky humor that can be displayed in animations of facial expressions, sound effects and the like. This need not get in the way of learning.

Keyboard, mouse and typing

Non-adult learners in particular, will tend to integrate the use of mouse and keyboard to navigate and manipulate onscreen information. And there should be a choice. A large amount of typing by the user is not encouraged. Where a learning resource requires the learner to input predictions, observations and explanations, this should be structured and directed in such a way that they are not fundamentally spending most of their time on keyboard skills rather than activities associated with the learning purpose.

Users demand control. The more control they have over events on the screen the more effective is their learning experience.

Quit and exit

This functionality is not required. Users should only be able to quit and exit browser based learning resource by closing the browser.

Help

Instruction and navigational information should be explicit within the interface and interaction design, and not located in a separate file. This is the case for all navigation, including keyboard

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navigation, unless it is considered to be so extraordinary that extra information is needed – and then it should be more like a tutorial or hint, in that it is responsive to the user interaction. Therefore instructional and navigational “Help” is not required to be a separate icon and file.

Rollover and hover text

This is not required on navigational icons and buttons. Either make the button visually representational or indeed use text on the button.

Where the user is required to use the information associated with a button or icon they must be able to select the icon to obtain this further information on a ‘pop up’, and then the user must be able to deactivate and close the ‘pop up’.

Glossaries

If there is an educational need for a glossary or further explanation of words, phrases and terminology introduced in the learning resource that cannot be adequately defined within the context of use – including illustration, animation and audio – then the presentation of the new words, terms or phrases should where possible, include an illustrative example (picture and or animation), and for language learning, audio to support pronunciation. A dictionary definition will not usually suffice. This is to ensure that meaning making is scaffolded.

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Educational Soundness Evaluation Checklist

Instructions for using this Checklist:

a) The purpose of the evaluation checklist is to determine whether or not a LR/TR/PDM achieved a general level of Educational soundness.
b) This checklist is used by the subject matter or curriculum specialist or Instructional Designer to design and or review a resource.
c) Resources NOT meeting the mandatory (**shaded**) qualities should not be further evaluated. The reviewer should complete the Checklist and provide a description of the issues in the Comments Section.
d) The completed Checklist is submitted to the QA Coordinator.
e) Any resource that passes this initial review will be subjected to a more extensive Educational Quality review. See Sections 7.5-7.8.

Resource Project Name/Code: **Title of Resource:**	
Location of Resource:	
Stage of Development of Resource	
QA Review:	
Current Format:	
Copyright:	

Mandatory (Shaded)

Qualities of the Learning Resource, Teaching Resource, Professional Development Material	**Yes/No/Not applicable (NA)** **Comments and Issues should be noted here.**	**Refer to Educational Soundness Specification v0.2**
1. Content is accurate and reflects the ways in which knowledge is conceptualized within the domain.		Integrity
2. Supports learners' deepening of knowledge within the content domain.		Integrity
3. Presents controversial issues with balance and fairness and in accordance with the DepEd curriculum policies, where these		Integrity

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apply.		
4. Uses language and symbols of the content domain and its ways of representation, and supports learners in developing and using them.		Integrity
5. The following are used correctly and appropriately: - terms and expressions - symbols and notations - diagrammatic representation - graphical representation		Integrity
6. Assists the learner with identifying and differentiating between different points of view and perspectives presented		Integrity
7. Uses content in ways that are real to life/authentic for learners/users: - are not over simplified or trivialized - makes sense to learners within their imaginary or real world - are realistic within the relevant context - enhances learners' social capital – their knowledge of how the world works and how to make a way in it		Learner Focus
8. Reflects the profile of the target learner/user for the curriculum or training area.		Learner Focus
9. Presents the same idea to learners/ users in multiple/multi-directional modes - visual text (e.g. pictures, diagrams) - verbal (written) text - symbolic representations - oral (spoken) text - both static and dynamic images		Learner Focus
10. Learning objectives are made explicit to learners/users.		Learner Focus
11. The target learners/users are clearly identified (academic level/technical ability/demographics addressed).		Learner Focus
12. Content is structured to scaffold learning.		Learner Focus
13. Provides an opportunity for learners/users to obtain feedback		Learner Focus

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either within or outside the resource.		
14. Pre-requisite knowledge/skills are clearly identified and their connections to prior and future learning are established.		Learner Focus
15. Is easy to use (time and effort to use it is reasonable) and the language is appropriate for the intended learner/user.		Usability
16. Clear instructions for use are provided (i.e., purpose, processes, intended outcomes are explicit).		Usability
17. Learning and information design is intuitive (i.e., the user knows what to do and how to do it).		Usability
18 The learning resource can be accessed by learners/users in deprived, depressed and underserved areas and communities.		Accessibility
19. The resource may not require teacher/facilitator intervention to be used effectively in varied learning environments and learning sequences (i.e.it may include instructions, terms, material in English/Filipino/local dialect as maybe necessary).		Accessibility
20. The learning resource connects to learners' personal/local knowledge and experience - linguistic and cultural experience - local (community/geographic) conditions - individual and family circumstances- including, gender, abilities, economic conditions - interest and degree of engagement (in particular addresses differently abled learners)		Accessibility
21. Resource does not confront or embarrass learners In any or all of the following ways: - require learner to expose personal data which may embarrass them - invade learners' privacy		Accessibility

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- unfavourably compare learners' learning performance with learners' identity - unfavourably or stereotypically compare family or community characteristics with learners' identity - unnecessarily or indiscriminately confront cultural beliefs or practices		
22.. Equivalent or alternative access to information is available for learners' with diverse needs - identical content or activity is presented in different modalities - different activities that achieve the same learning outcome are available		Accessibility
Result of Evaluation of the Resource		
Comments:		
Evaluation completed by: Name and Location **Date:** **Contact details:**		

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Print Test: Proof Evaluation

Project code/name:

Client:

Title of Resource:

Instructions:

1. Create a print copy of the resource as has been specified in the Request Brief.
2. Check the following is achieved before mass producing the resource.
3. If the print proof test does not meet the Readability requirements the resource should not be mass produced from the material provided. A new version may need to be created by creating a new digital copy for reproduction.

7.1.6 Reproduction and Packaging requirements

Requirements	Check X or write in requirements	
Color	Black and white	
Paper size and quality:	Size: A4, A3, etc.	Quality:
Packaging and Binding requirements:	Loose-leaf sheets Booklet/s	Card board folder Ring binder Bound
Print quantity:	No. of pages per package	No. of packages or sets of materials
Other:		

7.1.7 Proof review

Review the reproduced copy of the print material using the criteria in the table below. For any criteria where L is checked mass reproduction should be reconsidered.

Check X or NA for each criteria:

H = high quality; M = medium quality; L= low quality; NA = Not applicable

H	M	L	**Readability:**	Comment
			Typeface is clear	
			Text reproduction is clear and there is no blurring of characters.	
			Visuals are clear.	
			Text, captions, labels, pictures, tables and diagrams are	

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			attractive and clear.	
			Reproduction and packaging quality:	
			Visuals can be enlarged (photocopied) for student/teacher classroom use and retain visual quality	
			Page Layout is uncluttered.	
			Pictures rendered clearly	
			Packaging and design is suitable for the classroom:	
			Pages and handouts or student materials may be easily reproduced (photocopied)	
			Durability: paper quality and binding or collation of materials is suitable for classroom storage and use.	

Recommendation			
	Proceed with mass production		Do not proceed with mass production of the resource

Comments:

Evaluator: (Name)

Date:

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7.2 Proof test: Technical Evaluation of reproduced offline digital resource.

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Type of Media (Please check):

	CD-ROM		VCD		DVD		VHS		Slides
	Transparencies		Cassette tape		Digital interactive		Other s (please indicate)		

Instructions:

1. A proof test may have been created in-house or out-sourced. The proof test copy must be reviewed prior to signing off on mass production.
2. Review the proof test copy of the resource by playing and viewing the material. Technical conformance
3. Review the packaging and labelling for the sets of materials. Packaging requirements
4. Technical requirements
   a. Tested on: play back and viewing devices (Note devices tested)
   b. Tested on: Hardware and software requirements (Note Hardware/software configurations tested)
5. Packaging requirement and support materials

7.2.1 Interoperability: Technical conformance

Check all the areas of conformance. [X]

PRINCIPLE	REQUIREMENTS	SPECIFICATIONS
Support platform and browser independence	Resource can be used equally effectively in different browsers	☐ Mozilla Firefox 2 & 3 and Microsoft Internet Explorer 6.0 in Microsoft Windows 2000 ☐ Mozilla Firefox for 2 and Microsoft Internet Explorer 7.0 in Microsoft Windows XP ☐ Apple Safari 2.0 on Apple OS X

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	Resource can be used equally effectively on different operating systems / platforms	☐ Windows (Vista, XP) ☐ Linux ☐ Mac (up to 10.5)
Conforms to international standards (e.g. IMS) for web applications	Markup language	☐ XHTML 1.1
	Style sheets	☐ CSS 1 / CSS 2
	Documents	☐ PDF ☐ RTF
	Images	☐ PNG/MNG ☐ GIF ☐ JPEG
	Movies etc	☐ MP3 ☐ MOV ☐ MP2 ☐ AVI ☐ SWF ☐ FLV
	Plug ins	☐ Flash (9) ☐ Shockwave (10) ☐ QuickTime (7+) ☐ Java Applets
	Scripting	☐ JavaScript ☐ SWF

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Standalone files	Must be “portable” format	☐ Open Office ☐ Word/Excel/Power point ☐ TXT ☐ PDF ☐ RTF ☐ PDF is the recommended format (if possible)
Production / Authoring software	Support only interoperable media types	☐ See media types above + ☐ Web 2.0 ☐ XML
Size	Total file size in bytes	

7.2.2 H. Technical formats for offline digital resources

Identify for the resource being evaluated the technical requirements for viewing and using the resource. (playback devices, operating system, software, plug-in)

Video cassettes: format and player requirements

DVD: operating system, software, plug-in and player requirements

CD: operating system, software, plug-in and player requirements

VCD: operating system, software, plug-in and player requirements

Audio Cassette tapes: player requirements

7.2.3 Packaging Requirements

Requirements	Check X or write in requirements	
CD VCD DVD VHS	Disk size:	

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Audiotape		
Labels Packaging	Pressed on disk Adhesive Labels	Packaging: plastic covers, card covers
Print quantity:	No. of copies No. of disks or tapes per set	
Instructional materials	No. of pages per package	No. of packages or sets of materials
Other:		

Other Comments

Recommendation

Evaluator(s):

Date:

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7.3 Educational, Editorial and Packaging Review for Digitized Print Resources

7.3.1 Editorial and packaging

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Publication format/s. Check **X** all that apply.

	Word document		PDF		PowerPoint		HTML		Excel
	Rich Text Format RTF								

File size:

Number of pages when printed per set of materials:

Packaging requirements for offline distribution

Requirements	Check X or write in requirements	
Color	Black and white	
Paper size and quality:	Size: A4, A3, etc.	Quality:
Packaging and Binding requirements:	Loose-leaf sheets Booklet/s	Card board folder Ring binder Bound
Print quantity:	No. of pages per package	No. of packages or sets of materials

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Other:	

Quality Review

Factor 1: Format	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1.Prints				
1.1 Size of letters is appropriate to the intended user				
1.2 Spaces between letters and words facilitate reading				
1.3 Font is easy to read				
1.4 Printing is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).				
2. Illustrations				
2.1 Simple and easily recognizable				
2.2 Clarify and supplement the text				
2.3 Properly labelled or captioned (if applicable)				
2.4 Realistic / appropriate colors				
2.5 Attractive and appealing				
2.6 Culturally relevant				
3. Design and Layout				
3.1 Attractive and pleasing to look at				
3.2 Simple (i.e., does not distract the attention of the reader)				
3.3 Adequate illustration in relation to text				
3.4 Harmonious blending of elements (e.g., illustrations and text)				
4. Paper and Binding				
4.1 Paper used contributes to easy reading				
4.2 Durable binding to withstand frequent use				
5. Size and Weight of Resource				
5.1 Easy to handle				
5.2 Relatively light				
Total Points				
Note: Resource must score **at least 54 points** out of a maximum **72 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

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Factor 4: Content Accuracy **Note down observations about the information contained in the material, citing specific pages where the following errors are found**	**Not present** **4**	**Present but very minor & must be fixed** **3**	**Present & requires major redevelopment** **2**	**Poor** **Do not evaluate further.** **1**
1.Conceptual errors				
2. Factual errors				
3. Grammatical errors				
4. Computational errors				

Other Comments

(Please write your comments and recommendations on the material not captured in Factors 1-4. Use additional sheet if necessary.)

Recommendation

Evaluator(s):

Date:

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7.4 Evaluation and Review criteria for development of new PRINT Resources

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Publication format/s. Check X all that apply.

	Word document		PDF		PowerPoint		HTML		Excel
	Rich Text Format RTF		Other (specify)						

File size:

Number of pages when printed per set of materials:

Packaging requirements for offline distribution

Requirements	Check X or write in requirements	
Color	Black and white	
Paper size and quality:	Size: A4, A3, etc.	Quality:
Packaging and Binding requirements:	Loose-leaf sheets Booklet/s	Card board folder Ring binder Bound
Print quantity:	No. of pages per package	No. of packages or sets of materials
Other:		

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Quality Review

Instructions: Examine the material carefully and for each evaluation criterion consider the extent to which the resource meets the criteria. Check the appropriate number [with **4** being *Very Satisfactory (VS)*; **3** - *Satisfactory (S)*; **2** - *Poor*; and **1** – *Not Satisfactory*]. For a rating below 4, write your comments/justifications on each evaluation criterion. If an evaluation criterion is *Not Applicable (NA)*, the material is rated **3** on said criterion. Attach extra sheets if necessary. Your report may be completed in soft or hardcopy. Please write legibly if completing in hardcopy

Factor 1: Content	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1. Content is suitable to the student's level of development				
2. Material contributes to the achievement of specific objectives of the subject area and grade/year level for which it is intended				
3 Material provides for the development of higher cognitive skills such as critical thinking, creativity, learning by doing, inquiry, problem solving, etc.				
4.Material is free of ideological, cultural, religious, racial, and gender biases and prejudices				
5.Material enhances the development of desirable values and traits such as: (Put a check mark only to the applicable values and traits)				
❒5.1 Pride in being a Filipino ❒5.2 Scientific attitude and reasoning ❒5.3 Desire for excellence ❒5.4 Love for country ❒5.5 Helpfulness/Teamwork/Cooperation ❒5.6 Unity ❒5.7 Desire to learn new things	❒5.8 Honesty and trustworthiness ❒5.9 Ability to know right from wrong ❒5.10 Respect ❒5.11 Critical and creative thinking ❒5.12 Productive work ❒5.13 Other: (Please specify)			
6. Material has the potential to arouse interest of target reader				
7. Adequate warning/cautionary notes are provided in topics and activities where safety and health are of concern				

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Total Points				
Note: Resource must score **at least 21 points** out of a maximum **28 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

Factor 2: Format	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1.Prints				
1.1 Size of letters is appropriate to the intended user				
1.2 Spaces between letters and words facilitate reading				
1.3 Font is easy to read				
1.4 Printing is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).				
2. Illustrations				
2.1 Simple and easily recognizable				
2.2 Clarify and supplement the text				
2.3 Properly labelled or captioned (if applicable)				
2.4 Realistic / appropriate colors				
2.5 Attractive and appealing				
2.6 Culturally relevant				
3. Design and Layout				
3.1 Attractive and pleasing to look at				
3.2 Simple (i.e., does not distract the attention of the reader)				
3.3 Adequate illustration in relation to text				
3.4 Harmonious blending of elements (e.g., illustrations and text)				
4. Paper and Binding				
4.1 Paper used contributes to easy reading				
4.2 Durable binding to withstand frequent use				
5. Size and Weight of Resource				
5.1 Easy to handle				
5.2 Relatively light				
Total Points				
Note: Resource must score **at least 54 points** out of a maximum **72 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed**			

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	❒ **Failed**

Factor 3: Presentation and Organization	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1. Presentation is engaging, interesting, and understandable				
2.There is logical and smooth flow of ideas				
3.Vocabulary level is adapted to target reader's likely experience and level of understanding				
4. Length of sentences is suited to the comprehension level of the target reader				
5. Sentences and paragraph structures are varied and interesting to the target reader				
Total Points				
Note: Resource must score **at least 15 points** out of a maximum **20 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

Factor 4: Accuracy and Up-to-datedness of Information **Note down observations about the information contained in the material, citing specific pages where the following errors are found**	**Not present** **4**	**Present but very minor & must be fixed** **3**	**Present & requires major redevelopment** **2**	**Poor** **Do not evaluate further.** **1**
:				
1.Conceptual errors				
2. Factual errors				
3. Grammatical errors				

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4. Computational errors				
5. Obsolete information				
6. Typographical and other minor errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc.)				
Total Points				
Note: Resource must score **24** out of a maximum **24 points** to **pass** this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed- All issues must be documented in the comments section.**			

Other Comments

(Please write your comments and recommendations on the material not captured in Factors 1-4. Use additional sheet if necessary.)

Recommendation

Evaluator(s):

Date:

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7.4.1 Descriptors for Evaluation and Review criteria for development of new PRINT Resources

Important: These descriptors will guide you in giving an objective rating for each criterion item in the rating sheet. For ratings of 3 and below, your written comments in the rating sheet should indicate **specific pages and brief descriptions** of inadequacies in the material.

Factor 1: *Content*

1. Content is suitable to the student's level of development.

Descriptor:

The scope, range and depth of content and topics are appropriate to the target audience learning needs

The level of difficulty is appropriate for the intended target audience age and stage of learning

The level of detail is appropriate for the achievement of the specified learning outcomes for the intended target audience

2. Material contributes to the achievement of specific objectives of the subject area and grade / year level for which it is intended.

Descriptor:

Material promotes achievement of objectives of the intended subject area(s) and grade / year level(s).

Material supports the achievement of learning objectives and outcomes of the intended subject area(s) and grade / year level(s)

Material reinforces, enriches, and or leads to mastery of certain learning competencies

3. Material provides for the development of higher cognitive skills such as critical thinking, creativity, learning by doing, inquiry, problem solving, etc.

Descriptor:

The learning activities require cognitive effort not just chance selection of responses

The learning activities include one or more of the 6 facets of learning. (Explain, interpret, apply, have perspective, empathize, have self knowledge)

User is required to assume an increased responsibility for their learning.

Material promotes development of higher order thinking skills.

4. Material is free of ideological, cultural, religious, racial, and gender biases and prejudices.

Descriptor:

Refer to the Social Content Guidelines Section 6.8.

There are no ideological, cultural, religious, racial, and gender biases and prejudices found in the material.

Presentation of social content including values and perspectives is fairly represented.

All social content is fairly presented and does not violate the Social Content Guidelines

5. Material enhances the development of desirable values and traits.

Descriptor:

Inclusion of identified desirable value(s) / trait(s) is/are evident and/or properly discussed in the material.

Presentation of controversial social content is balanced and structured to promote an educated understanding of differing points of view.

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6. Material promotes interest of target reader.

Descriptor:

The material is presented in such a way that is likely to connect with the target reader's knowledge and experience.

Focussing techniques and cueing devices are evident such as variation in typeface, boxes and underlining.

7. Adequate warning / cautionary notes are provided in topics & activities where safety & health are of concern.

Descriptor:

Inclusion of adequate warning / cautionary notes (where needed) is evident in the material.

For example: "How to" instructions; symbols to represent health and safety requirements for activities.

Factor 2: *Format*

1. Prints

1.1 Size of letters is appropriate to the intended user.

1.2 Spaces between letters and words facilitate reading.

1.3 Font is easy to read.

1.4 Printing is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).

2. Illustrations

2.1 Simple and easily recognizable

2.2 Clarify and supplement the text

2.3 Properly labelled or captioned (if applicable)

2.4 Realistic / appropriate colors

2.5 Attractive and appealing

2.6 Culturally relevant

3. Design and Layout

3.1 Attractive and pleasing to look at

3.2 Simple (i.e., does not distract the attention of the reader)

3.3 Adequate illustration in relation to text

3.4 Harmonious blending of elements (e.g., illustrations and text)

4. Paper and Binding

4.1 Paper used contributes to easy reading.

4.2 Durable binding to withstand frequent use.

Descriptor:

Consider quality of paper, packaging and binding is appropriate for the intended use and expected life of the resource.

5. Size and Weight of SM

5.1 Easy to handle

5.2 Relatively light

Descriptor:

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Components are packaged for easy handling.

Factor 3: *Presentation and Organization*

1. Presentation is engaging, interesting, and understandable

Descriptor:

Presentation promotes engagement and supports understanding by the target user

Presentation stimulates active rather than passive learning.

2. There is logical and smooth flow of ideas.

Descriptor:

The logic of presentation of ideas is clear and evident to the target user.

Material is presented in well organized, consistent and predictable fashion.

Structure is apparent.

3. Vocabulary level is appropriate to target reader's experience and understanding.

Descriptor:

Vocabulary used is suitable / appropriate to the target reader age and level.

New or complex words and terms are clearly and consistently explained or defined.

Consider the amount of technical vocabulary used and the devices used to interpret, explain and define technical terms.

Consider the general level of difficulty of non-technical words used in terms of familiarity and abstractness.

4. Length of sentences is suited to the comprehension level of the target reader.

Descriptor:

Length of sentences is suitable to the target reader.

Consider the complexity of sentence patterns typically used. (Simple, compound, complex)

Be aware of attempts to simplify by omitting needed connections between ideas which may reduce the user's ability to make meaning.

5. Sentences and paragraph structures are varied and interesting to the target reader.

Descriptor:

Sentences and / or paragraph structures are varied and interesting to the target reader.

Language structures enhance meaning making.

Note the effective use and placement of topic sentences in paragraphs; this is usually easier at the beginning or end.

Factor 4: *Accuracy and Up-to-Datedness of Information*

1. Conceptual errors

Descriptor:

No conceptual error found

Presentation of content will not lead to the development of misconceptions or misunderstanding.

2. Factual errors

Descriptor:

No factual error found

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Presentation of factual content is accurate and up-to-date.

No outdated information, improper use of statistics; inaccurate graphs; over simplified models, examples or simulations.

3. Grammatical errors

Descriptor:

No grammatical error found

No spelling errors.

4. Computational errors

Descriptor:

No computational error found

5. Obsolete information

Descriptor:

No obsolete information found

6. Other errors such as errors in illustrations, diagrams, pictures, maps, graphs, and tables

Descriptor:

No error found

No outdated information- maps; inaccurate graphs, diagrams or pictures.

No over simplified models, examples or simulations.

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7.5 Accessibility Checklist

Guidelines

In **purchasing** instructional resources to meet special learning needs, applicable IMCS standards and requirements should be satisfied. In addition, (1) Intellectual Property Rights clearance (refer to Guidelines and Specifications for LRMDS IPR MANAGEMENT) should be ensured and where possible and/or desirable the technical format of the instructional resource intended for purchase should be capable of being rendered into multiple presentation formats (properly formatted Braille, Digital Talking Book, etc.). The resources to be purchased in relation to meeting special needs should provide equivalent learning as those resources prescribed for regular learners to meet the needs of the basic curriculum.

2. For **evaluating and cataloguing resources**, refer to **Education Soundness Specifications**

3. For **digitizing and modifying, design and development of new instructional resources** to meet special education needs, refer to IPR Management procedures and technical specifications, that is, if the instructional resource intended for modification is capable of being rendered into multiple presentation formats (properly formatted Braille, Digital Talking Book, etc.) before considering the specific indicators for Accessibility.

4. Consider the measures and specifications to **modify,** and for the **design and development of new instructional resources** indicated in this document less as prescriptions and more as a set of strategies that can be employed to overcome or minimize the barriers inherent in most existing print curricular materials. The specifications are recommended for the design and development of new instructional resources, to ensure that the instructional resource is more flexible and may accommodate learners with special needs in an inclusive environment.

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Principles, Measures and Specifications Evaluation Instrument

Digitizing and modifying, design and development of new instructional resources

Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
Provide Multiple Means of Representation	**Options for perception:** Display/presentation of information is appropriate				

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
	to learners with auditory, visual impairments				
		Hearing impaired:			
		Dialogue in video materials have text equivalent in the form of captions			
		Sounds in video materials have equivalents in the form of visual effects or alerts			
		Visually Impaired:			
		There is appropriate contrast between background and text and images			
		Multimedia materials - There are sound equivalents for visual effects and alerts			
		There are touch equivalents for key visuals, physical objects and spatial models			
		Text- Size of font is appropriate for those with diminished vision			
	Options for language and symbols Inequalities to access arise when information is presented to all students, regardless of their abilities and learning needs, through a single form of representation. An important instructional strategy is to ensure that alternative representations are provided not only for accessibility, but for clarity and comprehensibility across all students.	Various learning disabilities			
		Text demonstrates how complex expressions are composed of simpler words or symbols (e.g. “power – less – ness”)			
		Support for unfamiliar references (e.g. domain specific notation, idioms, figurative language, jargon, archaic language, colloquialism, and dialect) are embedded within the text			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		Support for vocabulary and symbols (e.g. hyperlinks or footnotes to definitions, explanations, illustrations, previous coverage, for electronic resources, there are hyperlinks to online dictionaries, thesauri, etc.; for print materials, contains glossary of terms) are embedded within the text			
		Complex concepts are simplified through the use of multiple examples			
		Text available or translatable to first language or mother tongue of intended users			
		Key concepts presented in one form of symbolic representation (e.g. an expository text or a math equation) are complemented with an alternative form (e.g. illustration, etc.)			
	Options that illustrate key concepts non-linguistically Text is a weak format for presenting many concepts and for explaining most processes especially for students who have text- or language-related disabilities. Providing alternatives like illustrations, simulations, images or interactive graphics – can make the information in text more comprehensible and accessible to learners with special needs	The learning resource provides one or more of the following options:			
		Key concepts presented in one form of symbolic representation (e.g. an expository text or a math equation) are complemented with an alternative form (e.g. an illustration, diagram, model, video, comic strip, storyboard, photograph, animation, physical or virtual manipulative)			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		Key concepts presented in illustrations or diagrams are complemented with verbal equivalents, explanations, or enhancements			
		Explicit links are made between information provided in texts and any accompanying representation of that information in illustrations, charts, or diagrams			
	Options that promote cross-linguistic understanding; Accessibility of a learning resource can be increased when there are options for the language of a learning resource to be explicitly linked with other spoken languages, like the mother tongue of the learners. This is particularly helpful when children are literate in those languages, rather than just orally proficient. Providing clear links between the relationships among different languages allows children to think flexibly and strategically about how they might use their strengths in one language to promote understanding in another.				
		Whenever possible, all key information in the language of instruction (e.g. English) is also available or translated in mother tongue			
	Options for Comprehension Proper design and presentation of information; Individuals differ greatly in their skills in information processing and in their access to prior knowledge through which they can assimilate				

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
	new information.				
		Uses explicit prompts for each step in a sequential process			
		Uses a variety of cognitive strategies (graphic organizers, such as, concept map, organizers, KWL, etc.)			
		Learning design includes ample activities to scaffold comprehension			
	Options for physical action LR provides alternative means of navigation for physical interaction	LR has one or a combination of the following means as appropriate			
		by hand by voice by single switch by joystick by keyboard or adapted keyboard by keyboard commands for mouse action by switch options by alternative keyboards by customized overlays for touch screens and keyboards			
	Options for expressive skills and fluency- LR's contain alternative modalities for expression and fluency such as multiple media, devices, templates, etc.				
		The resource provides learners with varying special needs different forms of expressing themselves competently (e.g. writing, singing, dance, poetry, art, etc.)			
		Provides and/or allows learners with multiple special needs to use a variety of flexible and accessible tools (e.g. learning to draw with a compass, spell checkers for writing assignments, calculators for computing) to			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		more successfully articulate what they know.			
	Options for executive function	LR provides an adequate number of the following strategies or activities:			
		There are prompts for readers to "stop and think" before acting			
		Includes activities that break long-term goals into reachable short-term objectives			
		Uses graphic organizers and templates for data collection and organizing information			
		Contains guided questions for monitoring or templates that guide self-reflection on quality and completeness of work			
		Contains and explains the use of different forms of self-assessment			
	Options for Recruiting Interest	LR has two or more options of activities:			
		LR has varied activities/with varied levels of difficulty/ novelty to choose from			
		Various types of rewards or recognition for effort are available			
		Uses varied contexts or content for practicing skills			
	Options for sustaining learner effort and persistence The resource has activities to help sustain learner effort and persistence	The learning resource provides for combinations of the following options as maybe appropriate:			
		Goals and objectives of tasks are persistently displayed in symbols or enhanced text			
		Has provisions for being used by individuals, and small groups in collaborative settings			
		Accepts several levels of acceptable performance			
		Contains prompts that guides learners when and how to ask			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		peers and or to ask teachers for help			
	Options for self-regulation LR provides activities that uses the intrinsic abilities of the learners to regulate their own emotions and motivations	Contains prompts, reminders, guides, rubrics, checklists that focus on:			
		Includes activities in which the learners get timely and understandable feedback from various sources.			
		LR provides access to alternative scaffolds (charts, templates, feedback, displays) to enable user to know how he is progressing			
Delivery/Access /Utilization					
	LR can be used in varied instructional settings	Instructional Materials can be used in one or more of the following settings: classroom, resource room, home, rehabilitation center, community-based center			
		Can be used in varied instructional settings: self-paced/, independent, teacher-facilitated big group, peer			

Glossary of Terms

Special education	Refers to instruction that is specially designed to meet the unique needs of learners with varying forms of disabilities.
Inclusion	Inclusion is defined as 'providing specially designed instruction and supports for students with special needs in the context of regular education settings.' (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*) Inclusion also means providing all students within the mainstream appropriate educational programs that are challenging yet geared to their capabilities and needs as well as any support and assistance they and or their teachers may need to be successful in the main stream (from '*Education of children with Special Needs in the Philippines" by Teresita Inciong*)
Disability	Refers to any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being. (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*)
Universal design for learning	'Universal Design for Learning (UDL) is an approach that addresses and redresses the primary barrier to making expert learners of all students. UDL helps meet the challenge of diversity by suggesting flexible instructional materials, techniques, and strategies that empower educators to meet these varied needs. A universally

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	designed curriculum is designed from the outset to meet the needs of the greatest number of users, making costly, time-consuming, and after-the-fact changes to curriculum unnecessary. The design for learning is built around three major principles: provision of multiple means of representation, provision of multiple means for action and expression, and provision of multiple means for engagement. The recommended principles and measures in this document were adopted from UDL. (*Center for Applied Special Technology, CAST has earned international recognition for its development of innovative, technology-based educational resources and strategies based on the principles of Universal Design for Learning UDL-* http://www.cast.org/publications/UDLguidelines/version1.html
Impairment	Refers to any loss or abnormality of psychological, physiological or anatomical structure or function (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*)
Blindness, low vision	*Low vision* is defined as visual acuity of less than 6/18, but equal to or better than 3/60, or corresponding visual field loss to less than 20 degrees, in the better eye with best possible correction. *Blindness* is defined as visual acuity of less than 3/60, or corresponding visual field loss to less than 10 degrees, in the better eye with best possible correction. (*10th Revision of the WHO International Statistical Classification of Diseases, Injuries and Causes of Death*)
Hearing impaired	A hearing impairment exists when an individual is not sensitive to the sounds normally heard by its kind. In human beings, the term hearing impairment is usually reserved for people who have relative insensitivity to sound in the speech frequencies. The severity of a hearing impairment is categorized according to *how much* louder a sound must be made over the usual levels before the listener can detect it. In profound deafness, even the loudest sounds that can be produced by the instrument used to measure hearing (audiometer) may not be detected. There is another aspect to hearing that involves the quality of a sound rather than amplitude. In people, that aspect is usually measured by tests of speech discrimination. Basically, these tests require that the sound is not only detected but understood. There are very rare types of hearing impairments which affect discrimination alone. http://en.wikipedia.org/wiki/Hearing_impaired
Accommodations	Accommodations are alterations in the way tasks are presented that allow children with learning disabilities to complete the same assignments as other students. Accommodations do not alter the content of assignments, give students an unfair advantage or in the case of assessments, change what a test measures. They do make it possible for students with LD to show what they know without being impeded by their disability. *National Center for Learning Disabilities (2006)*
Learning disorder	A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (*United States Department of Education, 2006*).

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7.6 Evaluation and Review for development of new Non-Print Materials

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

Media type/s of content: Identify the dominant media format. Check **X** all that apply:

	Word document		PDF		PowerPoint		HTML		Excel
	Rich Text Format RTF		Adobe Flash		Adobe Shockwave		Java applet		JPEG; GIF
	Other (specify)								

File size (download):

Instruction: Examine the material carefully and for each evaluation criterion consider the extent to which the resource meets the criteria. Check the appropriate number [with **4** being *Very Satisfactory (VS)*; **3** - *Satisfactory (S)*; **2** - *Poor*; and **1** – *Not Satisfactory*]. For a rating below 4, write your comments/justifications on each evaluation criterion. If an evaluation criterion is *Not Applicable (NA)*, the material is rated **3** on said criterion. Attach extra sheets if necessary. Your report may be completed in soft or hardcopy. Please write legibly if completing in hardcopy

Factor A. Content Quality	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1. Content is consistent with topics/skills found in the DepED Learning Competencies for the subject and grade/year level it was intended.				
2. Concepts developed contribute to enrichment, reinforcement, or mastery of the identified learning objectives .				
3. Content is accurate.				

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4. Content is up-to-date				
5. Content is logically developed and organized				
6. Content is free from cultural, gender, racial, or ethnic bias				
7. Content stimulates and promotes critical thinking				
8. Content is relevant to real-life situations				
9. Language (including vocabulary) is appropriate to the target user level				
10. Content promotes positive values that support formative growth.				
Total Points				
Note: Resource must score **at least 30 points** out of a maximum **40 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

Factor B. Instructional Quality	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1. Purpose of the material is well defined				
2. Material achieves its defined purpose.				
3. Learning objectives are clearly stated and measurable.				
4. Level of difficulty is appropriate for the intended target user				
5. Graphics / colors / sounds are used for appropriate instructional reasons.				
6. Material is enjoyable, stimulating, challenging, and engaging				
7. Material effectively stimulates creativity of target user.				

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8. Feedback on target user's responses is effectively employed				
9. Target user can control the rate and sequence of presentation and review.				
10. Instruction is integrated with target user's previous experience.				
Total Points				
Note: Resource must score **at least 30 points** out of a maximum **40 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

Factor C. Technical Quality	**V S** **4**	**S/NA** **3**	**Poor** **2**	**Not Satisfactory** **1**
1. Audio enhances understanding of the concept.				
2. Speech and narration (correct pacing, intonation, and pronunciation) is clear and can be easily understood.				
3. There is complete synchronization of audio with the visuals, if any				
4. Music and sound effects are appropriate and effective for instructional purposes.				
5. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing.				
6. Visual presentations (non-text) are clear and easy to interpret				
7. Visuals sustain interest and do not distract user's attention.				
8. Visuals provide accurate representation of the concept discussed				
9. The user support materials (if any) are effective.				
10. The design allows the target user to navigate freely through the material.				

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11. The material can easily and independently be used.				
Technical Evaluation: Complete Section G. Interoperability: Technical format Checklist for conformance **If not already completed prior to this review.**				
12. The material will run using minimum system requirements.				
13. The program is free from technical problems.				
Total Points				
Note: Resource must score **at least 39 points** out of a maximum **52 points** to pass this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed**			

Factor D. Other Findings **Note down observations about the information contained in the material, where the following errors are found:**	**Not present** **4**	**Present but very minor & must be fixed** **3**	**Present & requires major redevelopment** **2**	**Do not evaluate further** **1**
1. Conceptual errors				
2. Factual errors				
3. Grammatical and / or typographical errors				
4. Other errors (i.e., computational errors, obsolete information, errors in the visuals, etc.)				
Total Points				
Note: Resource must score **at least 16 points** out of a maximum **16 points** to **pass** this criterion. Please put a check mark on the appropriate box	❒ **Passed** ❒ **Failed. All issues must be documented in the Comments section.**			

Other Comments

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Recommendation

Evaluator(s):

Date: _____

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7.6.1 Descriptors for Factors A to D Evaluation and Review for development of new Non-Print Materials

Important: These descriptors will guide you in giving an objective and quantifiable score for each criterion item in the rating sheet. For ratings of 3 and below, your written comments in the rating sheet should indicate specific part and brief descriptions of inadequacies in the material. If a criterion is not applicable, give it a rating of 3.

Factor A. ***Content Quality***

1. Content is consistent with topics / skills found in the DepED Learning Competencies for the subject and grade/year level it was intended.

***Descriptor*:**

The material is consistent with topics found in the Learning Competencies (LC) for the subject and grade / year level it was intended

The material can be related to and supports development of skills related to the Learning Competencies

2. Concepts developed contribute to enrichment, reinforcement, or mastery of the identified learning objectives.

***Descriptor*:**

Very satisfactorily reinforces, enriches, and/or leads to mastery of identified learning objectives.

Material supports, compliments achievement of learning objectives of the subject area and grade / year level for which it is intended.

3. Content is accurate.

***Descriptor*:**

Presentation of factual content is accurate

No outdated information, improper use of figures, inaccurate graphs; over simplified models or diagrams.

4. Content is up-to-date.

***Descriptor*:**

All information provided is up-to-date.

No outdated information, improper use of figures, inaccurate graphs; over simplified models or diagrams.

5. Content is logically developed and organized.

***Descriptor*:**

The logic of the presentation and organization of the content is clear to the target user..

Content is presented in a well organized, consistent and predictable fashion.

Structure is apparent.

6. Content is free from cultural, gender, racial, or ethnic bias.

***Descriptor*:**

Refer to the Social Content Guidelines, Section 7.1.4.

There are no ideological, cultural, religious, racial, & gender biases/prejudices found in the material.

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Presentation of controversial social content is balanced and structured to promote an educated understanding of differing points of view. All social content is fairly presented and does not violate the Social Content Guidelines

7. Content stimulates and promotes critical thinking.

***Descriptor*:**

Comprehension and application of the content knowledge requires cognitive effort and not just chance selection of responses.

Material promotes higher order thinking skills.

The learning activities include one or more of the 6 facets of learning (explain, interpret, apply, have perspective, empathize and have self knowledge)

8. Content is relevant to real-life situations.

***Descriptor*:**

The content has application to real life situations.

Content of simulations is authentic.

Metaphors and scenarios enhance understanding of real-life situations.

9. Language (including vocabulary) is appropriate for target user.

***Descriptor*:**

Use of language is appropriate for the target user age and stage of learning.

Vocabulary used is suitable/ appropriate to the target users' level.

New or complex words and terms are clearly and consistently explained or defined.

Consider the amount of technical vocabulary use and the devices used to interpret, explain and define technical terms

Consider the general level of difficulty and density of non-technical words used in terms of familiarity and abstractness.

10. Content promotes positive values that support formative growth.

***Descriptor*:**

Inclusions of positive value(s) is / are evident and / or properly discussed in the material.

Factor B. *Instructional Quality*

1. Purpose of the material is well defined. (i.e., implicitly or explicitly defined)

***Descriptor*:**

The educational purpose is stated or is evident within the overall design of the material.

2. Material achieves its defined purpose.

***Descriptor*:**

Material is well designed and is likely to achieve its defined purpose.

Content relates to achievement of the learning purpose.

The material does not contain gratuitous information or graphics

3. Learning objectives are clearly stated and measurable.

***Descriptor*:**

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What the user is going to know and be able to do is clear.

4. Level of difficulty is appropriate for the intended target user.

***Descriptor*:**

The scope range and depth of content and topics are appropriate to the level of the target user.

Opportunities are provided for different levels of instruction.

Content chunking and sequencing are appropriate

The time spent working with the content is appropriate for the results gained.

5. Graphics / colors / sounds are used for the appropriate instructional reasons.

***Descriptor*:**

Illustrations/visuals are effective/appropriate Makes balanced use graphics, sound and color

Uses graphics, sound and color to augment the content

6. Material is enjoyable, stimulating, challenging, and engaging.

***Descriptor*:**

Pedagogy is innovative

Scaffolds and challenges students level of understanding. The design, presentation and representation of information promote user engagement.

7. Material effectively stimulates creativity of target user.

***Descriptor*:**

Promotes user engagement and encourages creativity.

8. Feedback on target user's responses is effectively employed.

***Descriptor*:**

Feedback is non-threatening, immediate, positive, motivational and user-sensitive.

Feedback is appropriate to the users' previous responses.

Feedback is contextual, immediate and logical.

All feedback to the user responses is timely and constructive

9. Target user can control the rate and sequence of presentation and review.

***Descriptor*:**

Users can revisit and replay active content.

Users can decide when to progress to the next step.

Access to different information/concept chunks is either logical or intuitive; if random there is a clear indication of the relationship of the chunks and the various paths available for exploring them.

10. Instruction is integrated with target user's previous experience.

***Descriptor*:**

Instructional prerequisites are stated or easily inferred.

Users are encouraged to review prior knowledge and understanding

Where prior knowledge or experience is required this is clearly identified and or a summary provided

Factor C. *Technical Quality*

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1. Audio enhances understanding of the concept.

***Descriptor*:**

Audio is used to enhance understanding and comprehension.

For example: written and spoken instructions.

Vocabulary development support

2. Speech / narration (correct pacing, intonation, and pronunciation) is clear and can be easily understood.

***Descriptor*:**

The voice over/speech is clear and can be easily understood.

The user can replay and stop and start audio.

3. There is complete synchronization of audio with the visuals, if any.

***Descriptor*:**

The audio and visuals are synchronized.

4. Music and sound effects are appropriate and effective for instructional purposes

***Descriptor*:**

Music and sound effects are used effectively. For example, as a focussing or cueing device.

5. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing.

***Descriptor*:**

The screen displays are pleasing, uncluttered, and easy to read.

The amount of text on screen is limited to the screen area rather than requiring continuous scrolling.

Longer text employs pagination techniques to navigate forward and back through the text.

6. Visual presentations (non-text) are clear and easy to interpret.

***Descriptor*:**

Visuals (images, diagrams, animations, video), are clear and easy to interpret.

Dynamic content can be revisited and replayed by the user if required.

7. Visuals sustain interest and do not distract reader's attention.

***Descriptor*:**

Graphic visualisation of ideas and phenomena is used to attract attention, aid retention, enhance understanding or create context

Visuals are used to compliment textual information

8. Visuals provide accurate representation of the concept discussed.

***Descriptor*:**

Visuals are accurate and do not misrepresent the concepts presented.

Interpretation of visuals will not result in misconceptions.

9. The user support materials (if any) are effective.

***Descriptor*:**

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The user support material provides adequate and clear instructions for using the material.
User support materials are relevant and effective

10. The design allows the target user to navigate freely through the material.

***Descriptor*:**

Navigation is clearly linked to the instructional purpose and learning design.
Navigation does not interfere with users' engagement in the content.
Any time spent learning the interface or control functions is small compared to the time on task functions.

11. The material can easily and independently be used.

***Descriptor*:**

The material allows and encourages students to work independently.

12. The material will run using minimum system requirements.

***Descriptor*:**

Refer to and complete Technical Evaluation Section 6.9
Can run on all platforms
Can run on MS Windows Vista, XP or Mac OS 10.
Can run on MS Windows 2000 or Mac OS 9
Can run on MS 98 below or below Mac OS 9

13. The program is free from technical problems.

***Descriptor*:**

No technical problems
Refer to and complete Technical Evaluation Section 6.9

Factor D. *Other Findings*

1. Conceptual errors

***Descriptor*:**
No conceptual error found
Presentation of content will not lead to the development of misconceptions or misunderstanding

2. Factual errors

***Descriptor*:**
No factual error found
Presentation of factual content is accurate and up-to-date
No outdated information, improper use of statistics; inaccurate graphs; over simplified models or examples.

3. Grammatical and / or typographical errors

***Descriptor*:**
No grammatical error found
No spelling errors

4. Other errors (i.e., computational errors, obsolete information, errors in the visuals, etc.)

***Descriptor*:**

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No error found

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7.7 Technical Evaluation and Review for development of new non-print resources

This checklist is derived from the LRMDS Technical Specification. Refer to Section X

Instructions:

1. Digital resources may be:
   a) digital and accessible online or offline (any digital file or composite of files that can be stored in an online repository or is distributed on CD, DVD, USB)
   b) digital offline (DVD, VCD, Videotape, audio cassette tape)
2. For a) Review using Sections A-F Usability Characteristics and Section G Technical Format Characteristics
3. For 1b) Complete Sections G and H.
4. Provide the following information:

Project code/name:

Client:

Title:

Subject area(s):

Grade / Year level:

DepED Bureau/FAP:

Date of Publication:

File size (download):

7.7.1 A-F Usability Characteristics

Put a check (✓) in appropriate cell.

CHARACTERISTICS	YES	NO	N/A
A Multimedia Design			
1. Media elements are of sufficiently high quality.			
2. Clear and precise instructions are provided in accessing multimedia.			
3. Appropriate forms of media are used to enhance presentation.			
4. The multimedia presentations have a coherent layout, design and background.			
5. Video is accompanied by a familiar control panel, featuring pause, volume, and slider (to move quickly to a desired part of the video) controls.			
6. Audio (other than short sound effects) is accompanied by a familiar control panel, featuring pause, volume, and slider (to move quickly to a desired part of the audio) controls.			
7. All images are accompanied by a detailed explanatory caption that the user can easily access.			

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8. All spoken sounds are accompanied by detailed textual transcription captions that the user can easily access.			

CHARACTERISTICS	YES	NO	N/A
B Overall Interface			
1. The design is visually appealing.			
2. The design is simple, i.e. not cluttered with irrelevant devices and information.			
3. The design is consistent throughout successive displays.			
4. Contains sufficient information and directions for the user to use the resource.			
5. The ways to navigate through the material are clear.			
6. Labels, buttons, menus, text, and general layout of the resource are consistent and visually distinct			
7. Fonts are readable in terms of size, color and contrast between the background and the text			
8. The user is always made aware of what to do next.			
9. The resource provides feedback about the system status and the user's responses.			
10. The user is informed of their position in the resource relative to its beginning and end.			
11. The user is informed when a new window (such as a browser window, tab or pop up) will be displayed.			

CHARACTERISTICS	YES	NO	N/A
C Behavior of Controls & System Information			
1. Clear visual indicators are used to display the position of the cursor on the screen.			
2. The cursor changes shape to indicate its function and provide information to the user.			
3. The resource responds obviously and appropriately to learners' actions.			
4. Icons that can be selected are designed to suggest their intended use.			
5. Controls found in many parts of the resource (menus, buttons, and so on) that serve similar functions throughout the resource are placed in similar locations in all displays.			
6. Menus, buttons and other familiar controls use the same or similar formats and appearances throughout the resource.			
7. A control that can be selected provides dynamic information to the user about the specific function (e.g. the mouse cursor changes appropriately and/or the control changes its visual appearance in some way).			
8. A control that has been selected indicates to the user that the selected event has been recognized.			

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CHARACTERISTICS	YES	NO	N/A
D Customizability/Support for User Preferences			
1. The user can adjust the size of the font for displayed text.			
2. The user can adjust the magnification of displayed materials.			
3. Methods to support navigation are clear and consistent throughout the resource (e.g. arrows, keyboard shortcuts, menus).			
4. The user can return to a previous state of the system and repeat from there.			
5. All functionality is accessible through mouse only.			
6. All functionality is accessible by the use of the mouse and or keyboard.			
7. The user can control the pace at which he/she moves through the material.			

CHARACTERISTICS	YES	NO	N/A
E Data Entry by User			
1. Data entry fields contain default values.			
2. Inputs into data entry fields are constrained so that only permissible values can be entered.			
3. The user is informed what the expected format of an entry (e.g. a date value) is, before the user makes the entry.			
4. The user is explicitly told when he or she needs to provide input.			
5. The user can control the length of time required to submit the data on a data entry form. (E.g. A “done” button is provided for the user to indicate completion of all data entry).			
6. The user is informed of exactly what is wrong with any erroneous data entries.			
7. The user can correct erroneous data entries / supply missing entries without having to re-enter correct items on the same form.			
8. Mandatory fields are clearly marked as such.			
9. Drop down lists of previously entered values are presented when the user subsequently enters data into similar fields.			
10. Data entry forms support the tab key to move between entry fields.			
11. The fields on the data entry form are visited in a logical order when the tab key is used to move between them.			

CHARACTERISTICS	YES	NO	N/A
F Hyperlinks			
1. Hyperlink text provides information about where the link will lead.			
2. Hyperlinks are formatted using acceptable formatting conventions for links (e.g. distinctive underlined font).			
3. Hyperlink text is consistently formatted throughout the resource.			

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4. The cursor changes appearance when it moves over the text of a hyperlink to inform the user of the presence of a hyperlink.			
5. Hyperlinks that result in the user being directed to material that is external to the current resource are clearly indicated.			

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7.7.2 G. Interoperability: Technical format

Check all the areas of conformance. X

PRINCIPLE	REQUIREMENTS	SPECIFICATIONS
Support platform and browser independence	Resource can be used equally effectively in different browsers	☐ Mozilla Firefox 2 & 3 and Microsoft Internet Explorer 6.0 in Microsoft Windows 2000 ☐ Mozilla Firefox for 2 and Microsoft Internet Explorer 7.0 in Microsoft Windows XP ☐ Apple Safari 2.0 on Apple OS X
	Resource can be used equally effectively on different operating systems / platforms	☐ Windows (Vista, XP) ☐ Linux ☐ Mac (up to 10.5)
Conforms to international standards (e.g. IMS) for web applications	Markup language	☐ XHTML 1.1
	Style sheets	☐ CSS 1 / CSS 2
	Documents	☐ PDF ☐ RTF
	Images	☐ PNG/MNG ☐ GIF ☐ JPEG
	Movies etc	☐ MP3 ☐ MOV ☐ MP2 ☐ AVI ☐ SWF ☐ FLV
	Plug ins	☐ Flash (9) ☐ Shockwave (10)

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		☐ QuickTime (7+) ☐ Java Applets
	Scripting	☐ JavaScript ☐ SWF
Standalone files	Must be “portable” format	☐ Open Office ☐ Word/Excel/Power point ☐ TXT ☐ PDF ☐ RTF ☐ PDF is the recommended format (if possible)
Production / **Authoring software**	Support only interoperable media types	☐ See media types above + ☐ Web 2.0 ☐ XML
Size	Total file size in bytes	

7.7.3 H. Technical formats for offline digital resources

Identify for the resource being evaluated the technical requirements for viewing and using the resource. (playback devices, operating system, software, plug-in)

Video cassettes: format and player requirements

DVD: operating system, software, plug-in and player requirements

CD: operating system, software, plug-in and player requirements

VCD: operating system, software, plug-in and player requirements

Audio Cassette tapes: player requirements

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7.8 IPR Evaluation Checklist and Guidelines

LRMDS Specification and Guidelines for Intellectual Property Rights Management

Introduction

The technological advancement and explosion of knowledge in our contemporary environment enables the educational community to cope with the increasingly complex and challenging state-of-the-art learning resources. What is true and modern today may become traditional and obsolete tomorrow. LRMDS provides guidelines to update upgrade and sustain the learning, teaching and professional development resources with proper acknowledgement and respect to whom the intellectual property right is due.

Definitions

Modify means enhance the content in which new copyright arises, but only to the extent that the modification cannot meaningfully inform or entertain independently of the original content. Modified materials retain the integrity of the original work. Modifications may consist in, but may not be limited to, updating of content, adding more recent examples, adding activities, worksheets, etc.

Derivative means any work derived from or developed from content including

- An Edited Version
- An Enhancement
- A Supplementary Work

Reproduction means making copies of the work by any means, including, without limitation by sound or visual recording and the right fixation and reproducing fixations of the work including storage of a protected performance or phonogram in digital form or other electronic medium. (http://creativecommons.org/licenses/by-sa/3.0/legal code). Reproduction does not entail any change in the content.

Reproduction of textbooks: In the Philippines includes authorization for DepED to reprint within a period of 5 years a maximum of 25% of the original quantity awarded. (2007 Textbook Call Guidelines for Elementary Filipino)

Use - as a verb means to read, view, play, perform, operate or execute the content (depending on its nature and format) within the functionality that is offered by the copyright to an ordinary user. (Curriculum Corporation, 2008)

Reuse means to use again.

Repurpose means to use for another purpose.

Recontextualize means to place or use the original material within a new context.

Textbook (TX) means an instructional material that completely and sufficiently develops the prescribed learning competencies, concepts and or topics for a specific grade or year level in a specific subject area.

Conditions of Use - refers to the document headed “Conditions of Use” which summarizes the conditions applicable to the use of the content.

Guidelines and checklist to support Intellectual Property Rights Management

Instructions:

1. Section A-D should be completed for all resources as the first part of the Evaluation process and before making a decision to catalogue, reproduce and distribute, or redesign and develop a resource.

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2.Section E-G relate to Maintenance and Management of the metadata and Catalogue of LRMDS.

3.For each resource complete the Evaluation table. **Place X in all cells that apply.**

4.Complete the IPR Evaluation Report ensuring that all requested details accurate and submit to LRMDS Manager or person requesting the Evaluation.

IPR Evaluation Report

Resource Title:

Copyright owner: *Name, Address, Contact details*

Publisher: *Name, Address, Contact details*

Date of publication:

License Agreement: *Attach a copy to this report as appropriate.*

A. Cataloguing print or digital resources *Cataloguing means creating a record of a resource in a database that will be published online*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
A 1 Is the existing LR/TR/PDM owned by DepED?	A 6	A2
A 2 Is the existing LR/TR/PDM owned by a third party?	A3	A 3
A 3 Is the owner of the LR/TR/PDM able to be identified?	A 4	Do not catalogue. Complete IPR Evaluation Report
A 4 Is there a license agreement available for this LR/TR/PDM?	A 5	A6
A 5 Do the terms in the license agreement allow cataloguing of the resource?	A 6	Complete IPR Evaluation Report.
A 6 The LR/TR/PDM may be Catalogued after successfully passing all other required evaluations.	Prepare IPR Evaluation Report	

B. Reproducing resources for offline distribution *Reproducing resources for offline distribution means to make multiple copies of a resource to distribute.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
B 1 Is the existing LR/TR/PDM owned by DepED?	B 6	B 2
B 2 Is the existing LR/TR/PDM owned by a third party?	B 3	B 2
B 3 Is the owner of the LR/TR/PDM able to be identified?	B 4	Do not Reproduce

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B. Reproducing resources for offline distribution *Reproducing resources for offline distribution means to make multiple copies of a resource to distribute.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
		Complete IPR Evaluation Report
B 4 Is there a license agreement available for this LR/TR/PDM?	B 5	B 6
B 5 Do the terms in the license agreement allow reproduction of the resource?	B 6	Do not Reproduce. Complete IPR Evaluation Report
B 6 Are there any quantity restrictions related to reproduction?	B 7. Document in IPR Report	B 7
B 7 Are there any restrictions on redeeming the cost of reproduction and distribution?	B 8. Document in IPR Report	B 8
B 8 The LR/TR/PDM may be Reproduced after successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	

C. Redevelopment of resources: Digitization only *A digital version of a non digital resource is created and all the original content and design is retained.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
C 1 Is the existing LR/TR/PDM owned by DepED?	C 6	C 2
C 2 Is the existing LR/TR/PDM owned by a third party?	C 3	C 3
C 3 Is the owner of the LR/TR/PDM able to be identified?	C 4	Do not Digitize Complete IPR Evaluation Report
C 4 Is there a license agreement available for this LR/TR/PDM?	C 5	C 6
C 5 Do the terms in the license agreement allow digitization of the resource?	C 6	Do not Reproduce. Complete IPR Evaluation Report
C 6 Are there any restrictions related to digitizing the resource?	C 7. Document in IPR Evaluation Report.	C 7
C 7 It can be verified that all design and content of the resource is the original work of the documented author/s.	C 8	C 8 Complete IPR Evaluation Report
C 8 Originality of the resource can be verified and acknowledgements of	C 9	Do not digitize

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C. Redevelopment of resources: Digitization only *A digital version of a non digital resource is created and all the original content and design is retained.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
all sources of reference are identified.		Complete IPR Evaluation Report
C 9 Are there any restrictions relating to access and distribution via secured online distribution?	C 10. Document in IPR Evaluation Report.	C 11
C 10 The LR/TR/PDM may be Digitized after successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	
C 11 The LR/TR/PDM may be digitized and upload for distribution via the LRMDS repository successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	

D. Redevelopment of resources: Modification and redesign *A resource is created using the content of a previous version of a resource and where necessary new content is created.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
D 1 Is the existing LR/TR/PDM owned by DepED?	D 6	D 2
D 2 Is the existing LR/TR/PDM owned by a third party?	D3	D 3
D 3 Is the owner of the LR/TR/PDM able to be identified?	D 4	Do not modify. Complete IPR Evaluation Report
D 4 Is there a license agreement available for this LR/TR/PDM?	D 5	D 7
D 5 Do the terms in the license agreement allow modification of the resource?	D 6	Do not modify. Complete IPR Evaluation Report.
D 6 Is all the copyright vested in DepED?		D7
D7 Is copyright of all material vested in one party?	D 8	Identify in the IPR Evaluation report required permissions to be cleared.
D 8 Is DepED authorized to modify the copyrighted LR/TR/PDM for purposes of instruction and or training?	D 9	Identify in the IPR Evaluation report required permissions to be cleared.
D 9 Is DepED authorized to create derivatives of the copyrighted LR/TR/ PDM for purposes of instruction and or training?		Identify in the IPR Evaluation report required

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D. Redevelopment of resources: Modification and redesign *A resource is created using the content of a previous version of a resource and where necessary new content is created.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
		permissions to be cleared.
D 10 The LR/TR/PDM may be modified and redesigned after successfully passing all other required evaluations.	Prepare IPR Evaluation Report The minimum set of rights metadata for modifying the LR/TR/PDM is documented in the IPR Evaluation. Copyright owner, Entity parties, License agreements Address and contact details of copyright owner Conditions/restrictions for modification and redevelopment.	

E. IPR Guidelines and checklist for new and redeveloped and digitized LR/TR/PDMS to be included in LRMDS repository.

Instructions:

1. The following Guidelines and Checklist refer to new and redeveloped LRs/TRs/PDMs that are to be reproduced, catalogued or uploaded in the LRMDS
2. Section E should be completed by the Division/Regional LRMDS personnel responsible for metadata.

E. Design and Develop	**YES**	**NO**
E.1. The redesign and development work including all the new content creation is without infringement/offense from the original copyright.	E 2	Do not reproduce or catalogue Review content for IPR conformance
E.2. Has permission been granted from the third party copyright owner for all third party content included in the resource?	E 3	Do not catalogue. Seek permission and acknowledgement requirements for all third party content included in the resource.
E. 3 Copyright information, acknowledgements are documented in the resource	E 4	E 4
E. 4 Copyright information, acknowledgements can be documented in the metadata	E 5	Do not catalogue or upload resource to LRMDS
E. 5 Complete Rights metadata	The minimum set of rights metadata for the LR/TR/PDM is documented in the Rights	

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	Elements of the Metadata. Copyright owner, Entity parties, License agreements Address and contact details of copyright owner Conditions/restrictions for modification and redevelopment.

F. Maintenance of LR/TR/PDMs catalogued and included in LRMDS

Section F is completed annually by the LRMDS Region QA Team

Specifications			
F. Maintenance	**Yes**	**No**	
F.1 Annual review and incorporation of new and existing legal requirements for IP rights completed.	Record of all LR/TR/PDM IPR update filed with LRMDS Manager.	Identify LRs requiring IP rights updates	

G. Publication of LR/TR/PDMs catalogued and included in LRMDS

Section G is completed by the LRMDS Administration and Publication personnel prior to the publication of the LR/TR/PDM.

Specifications			
G. Publication and Cataloguing	**YES**	**NO**	
G.1 The minimum set of rights metadata for digitizing LRs/TRs/PDMs is documented	Copyright owner, entity parties License agreement dates Address and contact details of copyright owner Conditions of use included in metadata.		

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8 LRMDS Maintenance and Storage Guidelines

8.1 Catalogue

8.1.1 Introduction

The LRMDS is a web based catalogue and online repository of learning, teaching and professional development resources. It functions as a clearinghouse. That is, the LRMDS provides information about the location of resources (hardcopy and softcopy) and allows users of the system to access directly digitized versions of resources that are published and stored within the LRMDS repository. It is also a quality assurance system providing support to DepED Regions, Divisions and Schools in the selection and acquisition of quality digital and non-digital resources in response to identified local educational needs.

The LRMDS provides access to quality resources from the Regions, Divisions, Cluster/School level: including,

- information on quantity and quality and location of textbooks and supplementary materials, and cultural expertise,
- access to learning, teaching and professional development resources in digital format and locate resources in print format and hard copy,
- standards, specifications and guidelines for:
    - assessing & evaluating,
    - acquiring & harvesting,
    - modification, development and production,
    - storage and maintenance, and;
    - publication and delivery.

The Learning Resources Management and Development System comprises four integrated sub-systems designed to support increased distribution and access to learning, teaching and professional development resources at the Region, Division and School/Cluster levels of DepED.

The Storage and Maintenance system is designed to ensure ongoing and sustainable access to quality learning, teaching and professional development resources via the LRMDS. The system comprises

i) the online catalogue of all quality assured resources that are:

- stored in the LRMDS repository,
- available from online sites, and;
- available as hard copies stored at the region, division and or school/cluster.

ii) content maintenance and review schedules and processes to ensure ongoing technical and educational fit for purpose

iii)archiving services.

8.1.2 LRMDS Catalogue

All content (LR/TR/PDMs) digital and non-digital that are to be located via the LRMDS are catalogued. The Regional Administration and Publication Group (LRMDS Manager) have responsibility for cataloguing all resources using agreed metadata specifications.

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LR/TR/PDMs evaluation and recommendations for cataloguing within LRMDS may be derived from School, Division, Region assessment and evaluations relating to existing DepED materials, newly developed resources, and modified resources. In all instances, the addition to the LRMDS catalogue is the responsibility of Regional Administration and Publication Group.

The Administration and Publication Group reviews the recommendations for the LR/TR/PDM to be catalogued. Cataloguing requires metadata to be applied to the resource prior to publication.

8.1.3 The Cataloguing process

The process for cataloguing a LR/TR/PDM comprises the following stages. See table 1.

1. **Compliance with LRMDS Specifications:** The LR/TR/PDM complies with minimum required specifications for inclusion in LRMDS catalogue.

   LRMDS Assessment and Evaluation recommendations and forms have been submitted to LRMDS Manager.

   LRMDS Development and Production QA conformance and recommendations.

2. **Metadata Application:** A catalogue entry is created by applying information to describe the resource attributes.

   The metadata template, offline or online version has been completed.

3. **Metadata quality review:** The metadata is reviewed by the LRMDS Administrator or person responsible for LRMDS Catalogue and the Catalogue entry is published.

4. **Publication:** Upload approved resource to LRMDS repository and or publish the metadata to create the Catalogue record.

8.1.3.1 Process for Cataloguing Offline Resources

1. The Evaluator/s will use the *LRMDS Assessment and Evaluation Guidelines and Processes* to review digital and non-digital resources for adding to the catalogue system of LRMDS.

2. The following specifications will be used as required for all resource reviews:

   - Education Soundness & Quality
   - NCBTS
   - Intellectual Property Rights
   - Accessibility
   - Technical
   - Online site rubrics

3. All Evaluation findings and recommendations are lodged with the Regional LRMDS Manager. The Regional LRMDS Manager is responsible for management of the LRMDS Catalogue.

4. Use the Metadata template to fill in the metadata for a resource being catalogued if you don't have access to the electronic template. Refer to 9.5.

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8.1.3.2 Process for Cataloguing Resources to be access from LRMDS Repository

All resources that have been redesigned or newly developed will in general be uploaded to the LRMDS repository for online access.

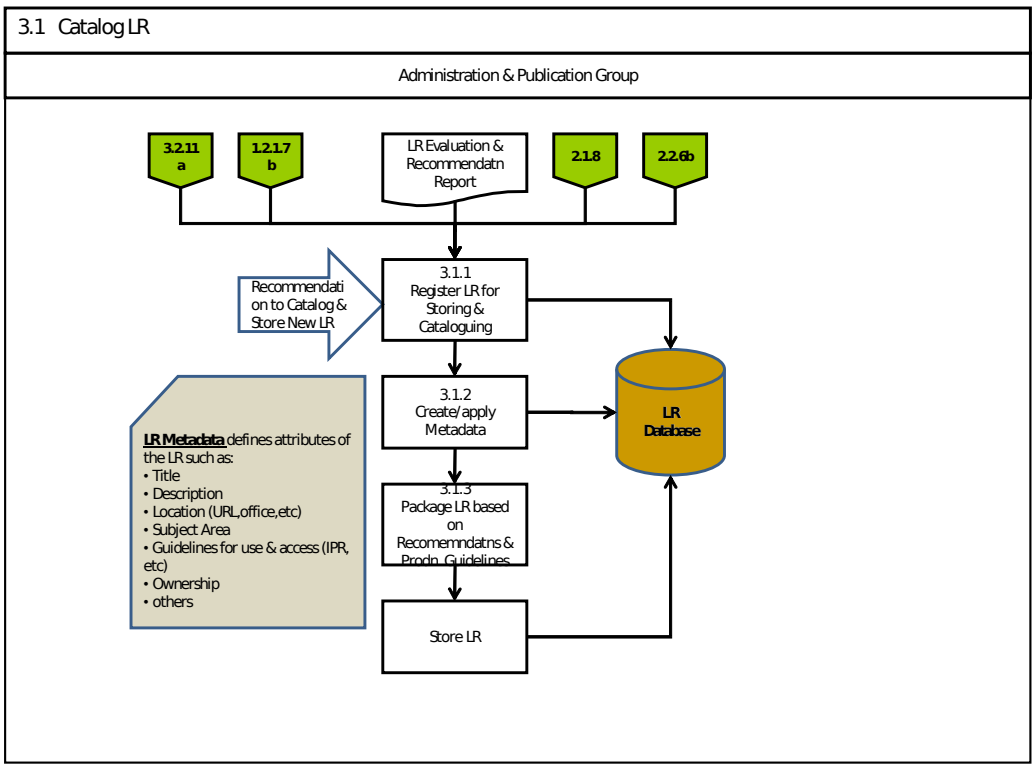
1. The resource conforms to all the required development and production quality assurance reviews as specified in the LRMDS Development and Production Guidelines and Processes.

2. Draft metadata is created and reviewed by LRMDS Production Coordinator.

3. Metadata is finalised when the resource has completed all quality assurance reviews and is submitted to be uploaded and published in LRMDS.

4. The LRMDS Manager approves publication of the resource and the metadata catalogue record.

Table 1



8.1.4 Compliance with LRMDS Specifications

a) Catalogue entry only

A LR/TR/PDM that is in a format (offline) that precludes it being accessed and downloaded from LRMDS. For example, textbook, reference book, CD, DVD, Videotape, audio tape, charts and maps, printed module, manipulative, resource person, or reference url.

The resource is reviewed and evaluated using the guidelines and criteria to determine conformance with Educational Soundness specification, Educational Quality, Accessibility

specification* and Intellectual Property Rights specification. For some digital resources the Technical specifications may also be used for evaluation.

Curriculum and Subject Matter Experts and or Instructional Materials Evaluators are the key personnel involved in evaluation of these types of resources. Refer to the LRMDS Assessment and Evaluation Guidelines and Processes.

* *Non-conformance to the Accessibility Specification is only a consideration if the resource is specifically being reviewed for use by users with Accessibility requirements.*

b) Catalogue and store in LRMDS repository

A LR/TR/PDM that has been digitised (redesigned and redeveloped) for inclusion in LRMDS repository, newly developed or licensed for publication and distribution via the LRMDS will also be catalogued.

The resource is reviewed and evaluated using the guidelines and criteria to determine conformance with Educational Soundness specification, Educational Quality, Accessibility specification*, Technical specification and Intellectual Property Rights specification.

Curriculum and Subject Matter Experts, Editors and or Instructional Materials Evaluators are the key personnel involved in the final Educational evaluation of these types of resources at the final conformance (publication phase) of the LRMDS development and production cycle.

Technical conformance is determined by the LRMDS Technical specialist using the LRMDS Technical Specification Evaluation criteria.

Intellectual Property Rights conformance is determined by the LRMDS Administrator or person responsible for LRMDS Catalogue.

* *Non-conformance to the Accessibility Specification is only a consideration if the resource is specifically being reviewed for use by users with Accessibility requirements.*

8.2 Metadata application

The LRMDS Metadata schema is part of the LRMDS Maintenance and Storage Specification. Information in relation to the nature and type of resource, its educational purpose, copyright and conditions of use is recorded in the metadata application profile of the resource. This information is made available to LRMDS users when they search and browse the online catalogue of LRMDS.

Within the Metadata schema guidelines are provided and describe what information should be included for each metadata element and illustrates the convention or standard for metadata entry. Refer to Section 9.5.

8.2.1 Metadata quality review

The metadata is reviewed by the LRMDS Administrator or person responsible for LRMDS Catalogue and the Catalogue entry is published.

8.3 Maintenance and review of LRMDS Catalogue

The Catalogue information (metadata) relating to each resource is updated whenever changes occur to the condition of the resource.

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9 Appendices

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9.1 LRMDS Educational Soundness Specification

Introduction

The Educational Soundness Specification is based on the holistic approach to education that gives emphasis on the underlying principles that each person finds identity, meaning and purpose in life through connections to the community, to the natural world and to spiritual values such as compassion and peace.

> *Holistic education aims to call forth from people an intrinsic reverence for life and a passionate love of learning. This is the definition given by Ron Miller, founder of the journal Holistic Education Review (now entitled Encounter: Education for Meaning and Social Justice). The term holistic education is often used to refer to the more democratic and humanistic types of alternative education. Robin Ann Martin (2003) describes this further by stating, "At its most general level, what distinguishes holistic education from other forms of education are its goals, its attention to experiential learning, and the significance that it places on relationships and primary human values within the learning environment." (Paths of Learning)* http://en.wikipedia.org/wiki/Holistic_education

The specification for educational soundness is focused on the underlying principles of connectedness, wholeness, and being; thus within this context learning resource materials will be developed, produced, and evaluated.

Taking into consideration these underlying principles, the specifications will ensure capacity of online and offline learning and teaching resources to successfully promote quality learning.

This Educational Soundness Specification adopted and made use of relevant and applicable measures and requirements of the existing specification of the The Learning Federation Schools Online Curriculum Content Initiative. http://www.thelearningfederation.edu.au

Purpose

This Specification for Educational Soundness will guarantee the pedagogical quality of online and offline learning and teaching resources (LR/TR) and is guided by the six goals of Education for All (EFA) by 2015 (UNESCO) and by the requirements of DepED Curriculum 2010.

The six goals are:

Goal 1: Expand early childhood care and education

Goal 2: Provide free and compulsory primary education for all

Goal 3: Promote learning and life skills for young people and adults

Goal 4: Increase adult literacy by 50 per cent

Goal 5: Achieve gender parity by 2005, gender equality by 2015

Goal 6: Improve the quality of education

Obligations

Curriculum planners, developers and stakeholders will fulfil the following obligations in undertaking and delivering learning, teaching and professional development resources DepED students and teachers.

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- to work towards the DepED policy vision of achieving high quality online/offline curriculum resources which foster the essential skills and knowledge that young Filipino learners need for the 21st century
- to consult with relevant organisations and user groups in establishing, implementing and reviewing this educational soundness specification
- to draw on relevant domain expertise, stakeholder representation and users in the formulation and enactment of the specification for evaluation, design and development and quality assurance purposes through involvement in validation, refinement, pilot-testing before the actual implementation.
- to proactively review, give feedback and, as appropriate, evolve the educational soundness specification to reflect the body of knowledge and practice derived from the quality assurance framework of LRMDS.

Monitoring and Usage

The Specification for Educational Soundness underpins assessment and evaluation, design, development and delivery of Learning and teaching resources. This specification applies to all learning, teaching and professional development resources (digital and non-digital) catalogued and accessed or located via the LRMDS online portal.

The specification guidelines will be used as primary basis for monitoring of quality assurance based on the principles specified herein.

The Specification for Educational Soundness will also apply to non-commissioned content that is proposed for inclusion in the LRMDS online portal. The version of the specification used is the one that prevails at the time that non-commissioned content is proposed for inclusion.

The quality assurance processes applied during content assessment and evaluation, design and development and delivery will enable continuous monitoring of the applied specifications in terms of their relevance and reliability. The specification and related guidelines for application and use are documented and published for each of LRMDS systems.

Conformance

All resources catalogued and or accessible via the LRMDS repository must adhere to the principles and measures and requirements described in this specification.

Principles

The Specification is underpinned by four principles:

- Integrity
- Learner-focus
- Usability
- Accessibility

Integrity

This principle recognises that the integrity of the content is a critical component of educational soundness. Integrity will be achieved when the content is authentic and when the learning resource design takes account of:

- the ways knowledge is conceptualised within the domain
- the skills and competencies of the domain

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- the ways of communicating both within and outside the domain

and is inclusive of the knowledge and understandings valued by various user groups and communities.

Learner Focus

This principle recognises that the learner is central to the concept of educational soundness.

- The design of digital and non-digital learning, teaching and professional development resources will respond to a detailed profile of the users for whom the material is intended. This profile is derived from relevant school demographics and educational data.
- The design will recognise that no two students learn in the same way. Across and within the same profile group, learners vary greatly in the ways they communicate (see, hear, speak, move), relate, think, behave, experience, feel, act, reflect, create, engage and remember.
- The design recognises cognitive development, diversity of learning, application to real world situation, multiple intelligences, constructivism and tele-collaborative, collaborative and cooperative learning

Resources will be considered to have learner focus when it has purpose, meaning and relevance for the learners and it:

- Makes explicit the intended process(es) of learning
- Enables learners to interact with, organise, represent, interpret and manage the process of learning and the information flow
- Contextualises student learning by making connections with prior learning and likely future learning through virtual and physical/face-to-face modalities

Usability

This principle recognises that usability in the educational context is fundamental. Usability means that the learning or teaching resource:

- is relevant in terms of the curriculum
- supports the process of learning
- recognises the importance of feedback mechanism as a means of monitoring progress
- enhances the ability of the learner to engage with its content.

Accessibility

This principle recognises the range of contexts in which teaching and learning take place and the diversity of teacher and student populations.

The LR/TR/PDM is designed, developed, evaluated and delivered so that users have access to educationally sound content regardless of age, socioeconomic status, race, culture, disability, gender or geographic location.

Measures and requirements

Integrity

Measures that will achieve learning resource integrity include the following.

Learning design that:

- accurately represents the ways of knowing and conceptualising the content domain
- uses the language and symbols of the content domain and its ways of representation and supports students in developing and using them

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- presents controversial issues with balance and fairness and in accordance with mandated curriculum policies, where these apply
- supports students' deepening of knowledge within the content domain
- assists the learner with identifying and differentiating between different points of view and perspectives presented
- incorporates content area advice supplied by expert representatives from relevant domains and practice areas.

Learner Focus

Measures that will achieve learner focus include the following.

Learning design that reflects the relevant learner profiles based on intended users, including:

- age and stages of schooling, including ALS
- community and cultural affiliations
- languages and dialects they speak, read and write
- socioeconomic status
- existing skills, knowledge and understanding.

Learning design that enables learners to interact with, organise, represent, interpret and manage the process of learning and the information flow through:

- making choices and decisions
- inquiring, investigating and problem solving
- eliciting and receiving relevant, timely and informative feedback
- interpreting, developing and presenting meaningful and useful products
- applying knowledge in a range of contexts.

Learning design that makes explicit and consolidates the process of learning through:

- structuring informational content in order to scaffold student learning
- enabling students to engage at varying levels of complexity
- reflecting an awareness of the varying educational environments in which
- learning sequences and objects may be used
- facilitating assessment of how learning is progressing.

Learning design that contextualises student learning through:

- establishing connections with prior and likely future learning
- making explicit to the learner the connections between the online content and the learning intention
- supporting communication, activity and collaborative action, both online and offline
- allowing the input of data collected offline to directly affect the responses, behaviour and product of the learning object
- using authentic situations where appropriate.

Learning tool design (such as content assemblage, generation, conversion and publishing) that maintains learner focus through the interaction between users and the learning content.

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Usability

Measures that will achieve usability include the following.

Learning design in which:

- the purpose, process and intended outcomes of the learning are explicit
- learning and information design is intuitive (that is, the user knows what to do and how to do it)
- the time and effort needed to use it is reasonable
- the medium is exploited to maximise the opportunities for learners to achieve the learning outcomes
- content is constructed in manageable and meaningful concept chunks to facilitate learning.

Accessibility

Measures that will achieve accessibility include the following.

The resource will be accessible when it:

- complies with accessibility standards for students with disabilities and for culturally diverse and remote communities
- utilises the capacity of media including multimedia to support student acquisition of intelligible English and Filipino languages
- provides specific language support for students whose first language is not English
- is appealing to and inclusive of students of all genders, socioeconomic groups, ages, races and cultures.
- recognises learning presented in the Mother Tongue.

Maintenance and review

This specification will be reviewed annually to ensure relevance and application to DepED education policy developments.

References

The Learning Federation, Curriculum Corporation Australia http://www.thelearningfederation.edu.au/for_jurisdictions/content_development_process/learning_objects/specifications.html Sourced: 03/12/2008

Howard Gardner, 2008 Multiple Intelligences http://www.howardgardner.com/MI/mi.html

Sourced: 03/12/2008

Jean Piaget Theory of Cognitive Development *www.learningandteaching.info/learning/**piaget**.htm*

Sourced: 03/12/2008

UNESCO Education for All (EFA) 2015

http://portal.unesco.org/education/en/ev.phpURL_ID=46881&URL_DO=DO_TOPIC&URL_SECTION=201.html Sourced: 03/12/2008

BECTA 2006. *Quality principles for learning resources. http://www.becta.org.uk*

CAST Universal Design for Learning Guidelines v1.0
http://www.cast.org/publications/UDLguidelines/version1.html

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British Columbia, Ministry of Education *2002. Evaluating Selecting and Managing Learning Resources*: *A Guide*.. http://www.bced.gov.bc.ca/irp/resdocs/esm_guide.pdf

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LRMDS Educational Soundness General Evaluation Criteria

Instructions:

a) The criteria may be used for the purpose of Assessing and Evaluating existing LR/TR/PDM for reproduction, redesign and development.
b) The criteria may also be used during the design and development stages of Development and Production of LR/TR/PDMs.
c) This checklist is used by the Education specialist (subject matter or curriculum expert) to evaluate an existing resource.

Title of Resource:

Location of Resource:

Current Format:

Copyright:

Mandatory (Shaded)

Qualities of the Learning Resource, Teaching Resource, Professional Development Material	**Yes/No/Not applicable (NA)** **Comments**	**Refer to Educational Soundness Specification v0.2**
1. The content of the learning resource is accurate and reflects the ways in which knowledge is conceptualized within the domain.		Integrity
2. Supports learners' deepening of knowledge within the content domain.		Integrity
3. Presents controversial issues with balance and fairness and in accordance with the DepED curriculum policies, where these apply.		Integrity
4. Uses language and symbols of the content domain and its ways of representation, and support learners in developing and using them		Integrity
5. The following are used correctly and appropriately: - terms and expressions - symbols and notations - diagrammatic representation - graphical representation		Integrity
6. Assists the learner with identifying and differentiating between different points of view and		Integrity

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perspectives presented		
7. Uses text data in ways that are real to life/authentic for learners - are not over simplified or trivialized - make sense to learners within their imaginary or real world - are realistic within the relevant context - enhance learners' social capital – their knowledge of how the world works and how to make a way in it		Learner Focus
8. Reflects the learner profile for (an agreed group of priority grade/year levels/strands) agreed curriculum priority area		Learner Focus
9. Presents the same idea to – learners in multi/multiple directional modes - *visual text (e.g. pictures, diagrams) - *verbal (written) text - symbolic representations - oral (spoken) text - both static and dynamic images		Learner Focus
10. Learning objectives are made explicit to learners		Learner Focus
11. The target learners are clearly identified (academic level/technical ability/demographics addressed)		Learner Focus
12. The learning resource structures information content in order to scaffold learners learning		Learner Focus
13. The learning resource provides an opportunity for learners to obtain feedback either within or outside the learning content		Learner Focus
14. Pre-requisite knowledge/skills are clear with connections to prior and future learning		Learner Focus
15. The learning resource stands alone and reflects an awareness of the varying educational environments in which learning sequences and resources may be used.		Learner Focus
16. The learning resource is easy to		Usability

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use (time and effort to use it is reasonable) and the language is appropriate for the user.		
17. Clear instructions for using the learning resource are provided (purpose, processes, intended outcomes are explicit).		Usability
18. Learning and information design is intuitive (the user knows what to do and how to do it)		Usability
19. The learning resource medium maximizes the opportunities for learners to achieve the learning outcomes		Usability
20. The learning resource is accessible to learners in deprived, depressed and underserved areas and communities.		Accessibility
21. The learning resource may not require teacher/facilitator intervention to be used effectively in varied learning environments and learning sequences (support in English/Filipino/local dialect).		Accessibility
22. The learning resource connects to learners' personal/local knowledge and experience - linguistic and cultural experience - local (community/geographic) conditions - individual and family circumstances- including gender, abilities, economic conditions - interest and degree of engagement (in particular addresses alienated learners)		Accessibility
23. The learning resource does not confront or embarrass learners. Activities do not: - require learner to expose personal data which may embarrass them - invade learners' privacy - unfavourably compare learners or characteristic with learners identify - unfavourably and stereotypically compare family or community characteristics		Accessibility

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with learners' identify - unnecessarily or indiscriminately confront cultural practices		
24. Equivalent or alternative access to information is available for learners' with diverse needs - identical content or activity is presented in different modalities - different activities are available that achieve the same learning outcome		Accessibility
Comments:		

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9.2 LRMDS Technical Specification for learning, teaching and professional development resources

Introduction

This document describes the principles and standards for the technical aspects of the LR/TR/PDM as related to LRMDS. The standards herein, following the ISO definition of the term *standard*, represent agreements that contain technical specifications and other precise criteria to be used rigorously to ensure that materials, products, processes and services of the LR/TR/PDM and LRMDS are technically fit for their purpose.

Purpose

The specifications in this document define the guiding principles and technical standards that should be applied in the assessment and/or production of digital learning, teaching and professional development resources that are to be incorporated into the LRMDS and subsequently made available to educators, education stakeholders and learners through catalogues and repositories.

The specifications follow established international standards, in particular the e-learning standards of the IMS Global Learning Consortium http://www.imsproject.org/ for accessibility and guidelines on user interface design and evaluation from The Learning Federation http://www.thelearningfederation.edu.au

A range of established technologies is prescribed in the standards to ensure the interoperability of the LRMDS systems and resources.

Obligations

The technical specification team will implement the following obligations in undertaking and delivering the technical standards outcomes:

1. consult with BESRA TWG, NLS-TWG, IMCS, ICT committee, DepED, Region and Division management, and technical advisers and associated DepED personnel representing LRMDS and the other components of STRIVE
2. ensure that the standards are adopted by DepED and are thus subject to adoption for national education support systems and adapted and augmented in the future as necessary

Monitoring and Usage

This specification applies to all learning, teaching and professional development resources developed by the LRMDS.

The specification will also be applied to resources produced externally to LRMDS and which are being considered for inclusion in the LRMDS catalogue and thus made available for use in teaching and learning nationwide.

The specifications will be updated and enhanced to respond to technological and related developments and the changing needs of target users of the system and the learning resources.

Principles

Accessibility

The resources and associated systems can be said to be accessible to the learners and teachers directly and indirectly when they interact with LRMDS, if the resources are responsive to the needs of individual users, in particular taking into account individual differences between users in their preferences for, and abilities to effectively process, various media and modalities. This implies that various modalities are used together in a coordinated way, so that information is not conveyed

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through the use of one modality alone. In particular, accessible resources permit the user to exercise some control over ensuring that the resource caters for that user's personal preferences.

Usability

The usability of a system is connected with its accessibility (see immediately above); however, here usability refers to the conformance of the resources and systems of the LRMDS to a set of standards that have been adapted from well-established guidelines for the design of effective user interfaces.

Interoperability

The standards specify that the resources, and the LRMDS itself, can be used to their full extent on a variety of common platforms, operating systems and web browsers.

It should be noted that, if the resources conform to the interoperability standards, the potential for their flexible use (for example in repurposing of the resource) is enhanced.

Scalability

In terms of these technical specifications, the LRMDS is scalable if it can deal with (a) increasing quantities of developed resources being added to the repository, and (b) increasing numbers of end users searching for, and downloading, resources via the resource catalogue.

The use of international storage standards that ensure efficient storage (for example MP2, MP3, etc) of learning resources, as described in relation to the other principles in the following section, serves as one facilitator of the scalability of the LRMDS. A second facilitator is a set of scalability guidelines, which can be found in section D.

System Storage and Maintenance

The LRMDS will feature subsystems that are concerned with the storage of metadata, learning resources, and associated subsystems to catalogue and search for stored resources. These subsystems will require maintenance to ensure their sustained successful operation.

Since the detailed design of these systems is part of the implementation of the ICT Work plan, a phase of the plan which is due to commence in October 2008, it is not possible here to give the precise standards to for storage and maintenance at this stage, apart from the international standards for multimedia and other file storage that are specified in the following section. As for Scalability therefore, this document includes only overall guidelines to apply to storage and maintenance. These are given in section E

LR Status Control and Tracking

The subsystems of the LRMDS (LRMDS Framework V1.0) are the LRMDS Assessment and Evaluation system, the LRMDS Development and Production system, the LRMDS Storage and Maintenance system and the Publication and Delivery system. The status of a resource, as reflected by its position in the workflow processes associated with these four subsystems, needs to be associated with the resource as that resources progress through one or more of the subsystems.

As for storage and maintenance (above), guidelines, rather than detailed specifications, are given for status control and tracking of LRs, as the precise mechanisms by which these guidelines are satisfied relies on decisions to be made during the detailed design of the ICT support for the LRMDS, following the STRIVE ICT Workplan V1.0. The guidelines are given in section F.

Maintenance and Development of the Standards

The standards, specification and guidelines in this document must be maintained and amended to respond to any of the continual rapid developments in ICT that have an impact on the LR and LRMDS. Moreover, if the standards are to be effective, they must, as stated earlier, be aligned with and or adopted by DepED, so that LR that conform to these standards also conform to the national standards.

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As far as STRIVE is concerned, the standards in this document are to be subject to further review as specified in the ICT Workplan V1.0, through a series of activities led by the STRIVE TAs that will involve representatives of the STRIVE divisions and regions and central DepED. These activities are specified as guidelines in section G.

Measures and requirements

A. Accessibility

PRINCIPLE	REQUIREMENTS	SPECIFICATIONS
Provide equivalent access to auditory and visual content based on user preference * Make applications accessible to those with hearing and visual impairments	Caption all auditory and visual content Provide a text transcription of all auditory content to support reading readability Provide equivalent access to all visual aspects of content Add detailed text descriptions Provide audio description tracks for multimedia describing visual aspects of content	it shows the title and the duration Audio must be supplied in MPEG Audio Layer 3 (MP3) format. Refer to "coding of moving pictures and audio", ISO at http://www.chiariglione.org/mpeg/standards/mpeg-1/mpeg-1.htm Video must be supplied in one of the following formats: QuickTime (v7.1.6) format - refer to http://www.apple.com/quicktime/ MPEG-4 video formats (ISO/IEC 13818) refer to "MPEG standards", the ISO website at http://www.chiariglione.org/mpeg/standards.htm.

B. Usability

PRINCIPLE	2- REQUIREMENTS	SPECIFICATIONS (see Annex A for detailed criteria used to apply these standards)
Provide consistency in the use of design elements such as formatting, appearance and functionality Allow learners to control their interactions, give them freedom to choose how to complete the task Follow established standards of design and use conventions that are familiar to learners Simplify the design wherever possible and	The resource should feature sufficient information so that the user knows how to use it effectively. Teach user how to navigate The resource should features to give the user has control over his/her navigation The design must exploit consistency so that the user can continue to interact with the resource in the way their earlier	Features that support navigation should enable the user to move smoothly through the material in obvious ways Related controls such as menus, buttons, navigation arrows etc, should be placed in similar locations on different screens, so that the user can easily locate them Controls such as buttons, menus, clickable objects etc should be of a design that suggests their function (affordance) Use simple and familiar designs for controls such as buttons, menus etc Avoid cluttering the display with graphics and other devices such as animation that play no real role in the learning resource

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stick to basic principles of aesthetics Provide context and orientation information Provide customizable interface features for interactive resources	interactions with that resource suggests.	Provide context sensitive help that the user can view whenever they need to A consistent layout should be maintained between pages/related screens
Use effective graphical design	Each page or screen should be visually balanced Use physical placement on the screen or page to establish and strengthen visual relationships between items Select one or more visual elements and use them throughout the piece to create a sense of rhythm Make different things look obviously different to create contrast between them Create a harmonious whole for all related items	Graphic file to around 250x360 pixel but not larger than 300x300 pixel Graphic format should contain web friendly colors and allow text to show up more clearly, preferably JPG Graphic file size of (JPEG format – for static and non-moving and regular graphics) is 50k and under for fast loading in emails, and guest books and websites Graphic images are of fine quality and not blurred Graphic styles are appealing to all users JIF is 85k and under for graphics with transparent backgrounds or animations for fast loading in emails, and guest books, and on websites Graphics must be represented in one of the following formats: Scalable Vector Graphics (SVG) version 1.0 format – refer to “Scalable Vectors Graphics (SVG), XML graphics for the web, W3c website at http://www.w3.org/Graphics/SVG/ PNG/MNG version 1.0 format – refer to PNG, W3C website at http://www.w3.org/Graphics/PNG/ JPEG format – refer to the JPEG website at http://www.jpeg.org/ Embedded objects (images etc) should conform to relevant interoperability and accessibility standards (see section 3.3) The contrast of color schemes can be checked at http://www.snook.ca/technical/colour_contrast/colour.html Note that Color Blindness affects green/red differentiations. The effect of this on a design can be checked at http://www.vischeck.com/

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C. Interoperability

PRINCIPLE	REQUIREMENTS	SPECIFICATIONS
Support platform and browser independence	Objects can be used equally effectively in different browsers	Mozilla Firefox 2 & 3 and Microsoft Internet Explorer 6.0 in Microsoft Windows 2000 Mozilla Firefox for 2 and Microsoft Internet Explorer 7.0 in Microsoft Windows XP Apple Safari 2.0 on Apple OS X
	Objects can be used equally effectively on different operating systems / platforms	Windows (Vista, XP) Linux Mac (up to 10.5)
Conforms to international standards (e.g. IMS) for web applications	Markup language	XHTML 1.1
	Style sheets	CSS 1 / CSS 2
	Documents	PDF RTF
	Images	PNG/MNG GIF JPEG
	Movies etc	MP3 MOV MP2 AVI SWF FLV
	Plug ins	Flash (9) Shockwave (10) QuickTime (7+) Java Applets
	Scripting	JavaScript SWF

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Standalone files	Must be “portable” format	Open office Word/Excel/Power point TXT PDF RTF PDF is the recommended format (if possible)
Production / Authoring software	Support only interoperable media types	See media types above Web 2.0 XML

D. Scalability Guidelines

The following table provides the guidelines to promote the scalability of the LRMDS as a system:

PRINCIPLE	GUIDELINES
Repositories of developed resources must be scalable	Only temporary storage of developed resources should be supported on division and region servers Templates and other tools should be locally stored for easy uninterrupted access Completed resources should be uploaded to a centrally administered repository (see ICT Workplan – STRIVE Milestone no. 14)
LRMDS catalogue must be scalable to deal with predicted rates of increase in access to computers by schools, LRMDS stakeholders and private individuals in the Philippines	Simple searchable indexes to the metadata should be maintained - these indexes should be searched and a link to the associated metadata followed. The metadata itself should not be directly searched in normal circumstances

E. System Storage and Maintenance Guidelines

The guidelines applying to storage and maintenance are as follows:

1- The servers used to store the partially completed resources, templates and other data at the region and divisions must be administered and maintained as part of the duties of the ICT co-ordinator that is appointed as the systems administrator in the respective region or division, as detailed in the ICT workplan. The following services must be provided in this regard:

- ensuring system security and securing systems from external attack, virus infestation
- regular system backup and the administration of a system restore feature
- management of user levels, access rights, user accounts and other end user related system services
- generally ensuring that the system runs optimally, troubleshooting and problem solving in general system operation

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2- An archiving facility is essential.
3- The following activities must take place, at regular intervals:
    - the technical specifications must be reviewed (ideally annually), as part of the LRMDS M&E activities
    - QA for all updates of the LRMDS must be carried out (also part of the LRMDS M&E)

F. LR Status Control and Tracking Guidelines

As described in the LRMDS framework V1.0, the LRMDS will consist of four major subsystems:

- Assessment and evaluation system
- Development, acquisition and production system
- Storage and maintenance system
- Publication and delivery system

Each of the above systems has embedded support subsystems dedicated to monitoring the progress of internally developed LR/TR/PDM and the acquisition of externally adopted LR/TR/PDM, including its effectiveness to end users. Identified learning resources will undergo a series of evaluations from school, division and region to establish their suitability and appropriateness to target users.

Though the *educational* evaluation of LR/TR/PDM is beyond the scope of these technical specifications, the evaluation processes will require control and tracking mechanisms to determine the current status of every learning resource, in terms of its location in the workflow processes associated with the major subsystems of LRMDS as outlined above.

PRINCIPLE	GUIDELINES
It must be possible to distinguish between LR/TR/PDM in terms of their status in the workflow processes	Division and region systems must clearly distinguish, for each resource, whether that resource is: • earmarked for publication, but not yet ready • ready for publication • assigned to be digitized • being repurposed / contextualized • undergoing development • developed • published • repurposed / contextualized Features of the system that control the above must be administered by an assigned ICT coordinator who oversees: • the tracking of the LR through the workflow process • the coding convention that indicates revision, version and modification status the LR. Repurposed learning resources must be uploaded to LRMDS for re-cataloging and storing

G. Guidelines for Maintenance and Development of the Standards

The following table provides the guidelines for the further development and refinement of the standards and their adoption and continued support by central DepED.

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PRINCIPLE	GUIDELINES
The standards must be further developed and refined during the design of the STRIVE ICT support systems for LR and LRMDS The standards should be adopted and subjected to future review, maintenance and development by DepED	The standards must be refined following the functional and technical design of the LRMDS (see ICT Workplan (Milestone 14) V1.0, Annex E : Detailed Development & implementation Schedule, Items 70-72) First Quarter, 2009 Standards are to be refined and approved by DepED in a Workshop following formulation by STRIVE ICT TAs (representatives of Regions, Divisions, ICT Coordinators, DepED ICT Committee) UIS replication plan to include guidelines for further review, development and maintenance of the standards (see ICT Workplan (Milestone 14) V1.0, Annex E : Detailed Development & implementation Schedule, Items 70-72) First Quarter, 2010 Replication plan to specify roll out of LRMDS ICT systems by DepED after the lifetime of STRIVE To be endorsed by DepED

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Annex A

CRITERIA FOR THE USER INTERFACE TO THE LR & LRMDS

Title of the Material:

Format of the Material:

Subject Area:

Target Learner:

Copyright owner:

Rating: YES / NO / Not Applicable

USABILITY CHARACTERISTICS

CHARACTERISTICS	YES	NO	N/A
A Multimedia Design			
1. Media elements are of sufficiently high quality			
2. Clear and precise instructions are provided in accessing multimedia			
3. Appropriate forms of media are used to enhance presentation			
4. The multimedia presentations have a coherent layout, design and background			
5. Video is accompanied by a familiar control panel, featuring pause, volume, and slider (to move quickly to a desired part of the video) controls			
6. Audio (other than short sound effects) is accompanied by a familiar control panel, featuring pause, volume, and slider (to move quickly to a desired part of the audio) controls			
7. All images are accompanied by a detailed explanatory caption that the user can easily access			
8. All spoken sound is accompanied by a detailed textual transcription caption that the user can easily access			

CHARACTERISTICS	YES	NO	N/A
B Overall Interface			
1 The design is visually appealing			
2 The design is simple and not cluttered with irrelevant devices and information			
3 The design is consistent throughout successive pages/displays			
4 The resource contains sufficient information to make it clear to the user how it is to be used			
5 The ways in which the user can navigate through the material are clearly outlined			
6 Labels, buttons, menus, text, and general layout of the resource are consistent and visually distinct			

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7 Fonts are readable in terms of size, color and contrast with the background to the text			
8 The user is always made aware of what to do next			
9 The resource provides feedback about the system status and the user's responses			
10 The user is informed of the length (e.g. number of pages) of the document			
11 The user is informed of their position in the document relative to its beginning and end			
12 The user is informed when a new window (such as a browser window, tab or pop up) will be displayed			

CHARACTERISTICS	YES	NO	N/A
C Behavior of Controls & System Information			
2. Clear visual indicators are used to display the position of the cursor on the screen			
3. The cursor changes shape to indicate its function/provide information to the user			
4. The resource responds obviously and appropriately to learners' actions			
5. Icons that can be clicked are designed to suggest their intended use			
6. Controls found in many parts of the resource (menus, buttons, and so on) that serve similar functions throughout the resource are placed in similar locations in all displays			
7. Menus, buttons and other familiar controls use familiar formats and appearances			
8. A control that can be clicked provides dynamic information to the user suggesting this (e.g. the mouse cursor changes appropriately and/or the control changes its visual appearance in some way)			
9. A control that has been clicked indicates to the user that the click event has been recognized			

CHARACTERISTICS	YES	NO	N/A
D Customizability/Support for User Preferences			
• The user can adjust the size of the font for displayed text			
• The user can adjust the magnification of displayed materials			
• There are various methods to support navigation (e.g. arrows, keyboard shortcuts, menus, etc)			
• The user can return to a previous state of the system and repeat from there			
• All functionality is accessible through both a mouse and a keyboard or a keyboard alone			
• The user can control the pace at which he/she moves through the material			

CHARACTERISTICS	YES	NO	N/A
E Data Entry by User			

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➢ Default values are presented for data entry fields			
➢ Inputs into data entry fields are constrained so that only permissible values can be entered			
➢ The user is informed what the expected format of an entry (e.g. a date value) is, before the user makes the entry			
➢ The user is explicitly told when he or she needs to provide input			
➢ The user can control the length of time required to submit the data on a data entry form (e.g. a "done" button is provided for the user to indicate completion of all data entry)			
➢ The user is informed of exactly what is wrong with any erroneous data entries			
➢ The user can correct erroneous data entries / supply missing entries without having to re-enter correct items on the same form			
➢ Items to be entered that are mandatory are clearly marked as such			
➢ Drop down lists of previously entered values should be presented when the user subsequently enters data into similar fields			
➢ Data entry forms support the tab key to move between entry fields			
➢ The fields on the data entry form are visited in a logical order when the tab key is used to move between them			

CHARACTERISTICS	YES	NO	N/A
F Hyperlinks			
• Hyperlink text provides information about where the link will lead			
• Hyperlinks are formatted using acceptable formatting conventions for links (e.g. distinctive underlined font)			
• Hyperlink text is consistently formatted throughout the resource			
• The mouse cursor changes its appearance to inform the user of the presence of a hyperlink when the cursor moves over the text of that hyperlink			
• Hyperlinks that result in the user being directed to material that is external to the current resource are clearly indicated			

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9.3 LRMDS Intellectual Property Rights Management Specification

Introduction

The Intellectual Property Right (IPR) Specification is one of the specifications for Learning Resource Management and Development System (LRMDS). It refers to the exclusive right of the commissioned and non commissioned developers and aims to protect them from exploitation via unauthorised reproduction or adaptation of their intellectual property creation for a specified period of time with permission and as mandated in Republic Act No. 8293. This Act provides that the state shall protect and secure the exclusive right of the artist and other gifted citizen to their intellectual property and creation.

Purpose

The Learning Resource Management and Development System (LRMDS) Intellectual Property Rights and Management specification is based on national and international best practices in the emerging areas of digital/non-digital rights management. It is based on ensuring that DepED will meet with relevant statutory and contractual obligations, and optimise the creation, trade and usage of online and analogue content.

Obligations

The Learning Resource Management and Development System (LRMDS) will fulfil the following legislative and leadership obligations in undertaking and delivering the Learning Resources (LR), Teacher Resources (TR), and Professional Development Materials (PDM) to target users.

- To protect copyrighted materials from unauthorized usages and to honour the exclusive rights that are exercised by the management of LRMDS online and analogue content as specified under the Republic Act Number 8293.
- To ensure that the digital rights management model and attendant technology enhances the capacity of the schools sector to cost efficiently meet its statutory obligations under Republic Act Number 8293 and that the model is available to inform the Philippine education sectors' performance in this area.

Monitoring and Usage

The LRMDS IPR specification applies to all learning resources commissioned, catalogued and accessible or located via the LRMDS.

This specification will also be applied to non-commissioned resources proposed for inclusion in the LRMDS repository. Not all of these specifications may be applicable to non-commissioned content and deviations may be negotiated with the rights owner.

The LRMDS IPR specification is the generic specification to be applied to all LR, TR and PDM development and production, evaluation and assessment, storage and distribution. However, a contracted content specification will be based on an adaptation of the available licensing models, legally enacted through contract.

The quality assurance processes applied during content development and production, evaluation and assessment, storage and distribution of LR/TR/PDM will enable continuous monitoring of the applied specifications in terms of their relevance and reliability.

Conformance

Content conforming to this specification must adhere to the principles and the measures and requirements described in this specification.

Principles

The specification will be used to assess whether the creation, trade and usage of the LRMDS intellectual property rights conforms to the following principles:

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- Equitable rights licensing
- Authoritative rights branding
- Flexible rights trading
- Legal rights compliance

Equitable rights licensing

The first principle aims to ensure that the negotiation of intellectual property licensing is undertaken in a balanced manner to benefit the education sector as well as stimulating the education resource development market.

Authoritative rights branding

The second principle recognizes the significance of user trust in the management, documentation and publication of rights information by DepED. Enactment of this principle is dependent on agreement to a common structure, format and expression of rights information.

Flexible rights trading

This principle derives from the digital, analogue, modular and dynamic nature of the learning content and its envisaged usages. User assemblage of the learning resources will be supported through rights licensing streamlining and provision of digital/non-digital rights management system within the LRMDS.

Legal rights compliance

The final principle enshrines the System's commitment to acknowledge and respect the rights of the original source.

Measures and requirements

Equitable rights licensing

Measures that will achieve equitable rights licensing include the following:

- Appropriate licensing models, developed in consultation with the DepED that delivers cost-effective resource development.
- Streamlined license negotiation with commissioned and non-commissioned developers based on clearly established LRMDS licensing regime and templates.
- Capacity to negotiate innovative licensing terms that contribute to sustainability of LRMDS resources and offer exploitation opportunities to developers and publishers.

Authoritative rights branding

Measures that will achieve authoritative rights branding include the following:

- Automation of rights management information submission and validation throughout content development.
- Referencing of curriculum materials in standardized, internationally compliant and consistent manner
- Adherence to a minimum set of rights metadata for acceptance into the LRMDS repository.
- Transparent and accessible rights information records that foster target users and community confidence in system performance.

Flexible rights trading

Measures that will achieve flexible rights trading include the following:

- Accommodation of diversity of intellectual property assets within the LRMDS repository.

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- Utilization of digital/non-digital rights management system that manages content development and remuneration.
- Use of robust rights information models that can handle complex and dynamic rights agreements, entities, roles and parties.
- Exploit the reuse, repurpose, redevelop and reproduce of modular and dynamic learning content to support new content creations and rewarding of upstream rights holders.

Legal rights compliance

Measures that will achieve legal rights compliance include the following:

- Utilizing the Monitoring and Evaluation System to check and validate content permissions and as appropriate, enforcement technology to protect its usage.
- Availability of digital/non-digital rights management tools to downstream users to ensure capability for meeting rights management responsibilities.
- Availability of rights information to educate users the responsibilities in relation to usage of the LRMDS content.
- Tracking of users and content usage to ensure statutory compliance and compulsory licensing recording within LRMDS.

Maintenance and review

Measures that will achieve maintenance and review include the following:

- Getting feedback from the learners/various stakeholders
- Sourcing of funds (GOs, GAA, NGOs)
- Mobilization of community resources as well as international community in terms of expertise
- Review of existing and incorporation with the new laws of IP rights as related to republic of the Philippines.

Reference

Curriculum Corporation, The Learning Federation: Australia Intellectual Property Rights Specification

Code of Fair Practices in Fair Use for Media in Literacy Education

http://www.centerforsocialmedia.org/resources/publications/code_for_media_literacy_education/

Creative Commons http://creativecommons.org/licenses/by-sa/3.0/legal code

2007 Textbook Call Guidelines for Elementary Filipino

Curriculum Corporation, The Learning Federation, Australia

http://www.thelearningfederation.edu.au

Republic Act No. 8293 “Intellectual Property Code of the Philippines”

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IPR Evaluation Checklist and Guidelines

LRMDS Specification and Guidelines for Intellectual Property Rights Management

Introduction

The technological advancement and explosion of knowledge in our contemporary environment enables the educational community to cope with the increasingly complex and challenging state-of-the-art learning resources. What is true and modern today may become traditional and obsolete tomorrow. LRMDS provides guidelines to update upgrade and sustain the learning, teaching and professional development resources with proper acknowledgement and respect to whom the intellectual property right is due.

Definitions

Modify means enhance the content in which new copyright arises, but only to the extent that the modification cannot meaningfully inform or entertain independently of the original content. Modified materials retain the integrity of the original work. Modifications may consist in, but may not be limited to, updating of content, adding more recent examples, adding activities, worksheets, etc.

Derivative means any work derived from or developed from content including

- An Edited Version
- An Enhancement
- A Supplementary Work

Reproduction means making copies of the work by any means, including, without limitation by sound or visual recording and the right fixation and reproducing fixations of the work including storage of a protected performance or phonogram in digital form or other electronic medium. (http://creativecommons.org/licenses/by-sa/3.0/legal code). Reproduction does not entail any change in the content.

Reproduction of textbooks: In the Philippines includes authorization for DepED to reprint within a period of 5 years a maximum of 25% of the original quantity awarded. (2007 Textbook Call Guidelines for Elementary Filipino)

Use - as a verb means to read, view, play, perform, operate or execute the content (depending on its nature and format) within the functionality that is offered by the copyright to an ordinary user. (Curriculum Corporation, 2008)

Reuse means to use again.

Repurpose means to use for another purpose.

Recontextualize means to place or use the original material within a new context.

Textbook (TX) means an instructional material that completely and sufficiently develops the prescribed learning competencies, concepts and or topics for a specific grade or year level in a specific subject area.

Conditions of Use - refers to the document headed “Conditions of Use” which summarizes the conditions applicable to the use of the content.

Guidelines and checklist to support Intellectual Property Rights Management

Instructions:

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5.Section A-D should be completed for all resources as the first part of the Evaluation process and before making a decision to catalogue, reproduce and distribute, or redesign and develop a resource.

6.Section E-G relate to Maintenance and Management of the metadata and Catalogue of LRMDS.

7.For each resource complete the Evaluation table. **Place X in all cells that apply.**

8.Complete the IPR Evaluation Report ensuring that all requested details accurate and submit to LRMDS Manager or person requesting the Evaluation.

IPR Evaluation Report

Resource Title:

Copyright owner: *Name, Address, Contact details*

Publisher: *Name, Address, Contact details*

Date of publication:

License Agreement: *Attach a copy to this report as appropriate.*

A. Cataloguing print or digital resources *Cataloguing means creating a record of a resource in a database that will be published online*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
A 1 Is the existing LR/TR/PDM owned by DepED?	A 6	A2
A 2 Is the existing LR/TR/PDM owned by a third party?	A3	A 3
A 3 Is the owner of the LR/TR/PDM able to be identified?	A 4	Do not catalogue. Complete IPR Evaluation Report
A 4 Is there a license agreement available for this LR/TR/PDM?	A 5	A6
A 5 Do the terms in the license agreement allow cataloguing of the resource?	A 6	Complete IPR Evaluation Report.
A 6 The LR/TR/PDM may be Catalogued after successfully passing all other required evaluations.	Prepare IPR Evaluation Report	

B. Reproducing resources for offline distribution *Reproducing resources for offline distribution means to make multiple copies of a resource to distribute.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*

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B. Reproducing resources for offline distribution *Reproducing resources for offline distribution means to make multiple copies of a resource to distribute.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
B 2 Is the existing LR/TR/PDM owned by a third party?	B 3	B 2
B 3 Is the owner of the LR/TR/PDM able to be identified?	B 4	Do not Reproduce Complete IPR Evaluation Report
B 4 Is there a license agreement available for this LR/TR/PDM?	B 5	B 6
B 5 Do the terms in the license agreement allow reproduction of the resource?	B 6	Do not Reproduce. Complete IPR Evaluation Report
B 6 Are there any quantity restrictions related to reproduction?	B 7. Document in IPR Report	B 7
B 7 Are there any restrictions on redeeming the cost of reproduction and distribution?	B 8. Document in IPR Report	B 8
B 8 The LR/TR/PDM may be Reproduced after successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	

C. Redevelopment of resources: Digitization only *A digital version of a non digital resource is created and all the original content and design is retained.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
C 1 Is the existing LR/TR/PDM owned by DepED?	C 6	C 2
C 2 Is the existing LR/TR/PDM owned by a third party?	C 3	C 3
C 3 Is the owner of the LR/TR/PDM able to be identified?	C 4	Do not Digitize Complete IPR Evaluation Report
C 4 Is there a license agreement available for this LR/TR/PDM?	C 5	C 6
C 5 Do the terms in the license agreement allow digitization of the resource?	C 6	Do not Reproduce. Complete IPR Evaluation Report
C 6 Are there any restrictions related to digitizing the resource?	C 7. Document	C 7

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C. Redevelopment of resources: Digitization only *A digital version of a non digital resource is created and all the original content and design is retained.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
	in IPR Evaluation Report.	
C 7 It can be verified that all design and content of the resource is the original work of the documented author/s.	C 8	C 8 Complete IPR Evaluation Report
C 8 Originality of the resource can be verified and acknowledgements of all sources of reference are identified.	C 9	Do not digitize Complete IPR Evaluation Report
C 9 Are there any restrictions relating to access and distribution via secured online distribution?	C 10. Document in IPR Evaluation Report.	C 11
C 10 The LR/TR/PDM may be Digitized after successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	
C 11 The LR/TR/PDM may be digitized and upload for distribution via the LRMDS repository successfully passing all other required evaluations.	Prepare IPR Evaluation Report.	

D. Redevelopment of resources: Modification and redesign *A resource is created using the content of a previous version of a resource and where necessary new content is created.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
D 1 Is the existing LR/TR/PDM owned by DepED?	D 6	D 2
D 2 Is the existing LR/TR/PDM owned by a third party?	D3	D 3
D 3 Is the owner of the LR/TR/PDM able to be identified?	D 4	Do not modify. Complete IPR Evaluation Report
D 4 Is there a license agreement available for this LR/TR/PDM?	D 5	D 7
D 5 Do the terms in the license agreement allow modification of the resource?	D 6	Do not modify. Complete IPR Evaluation Report.
D 6 Is all the copyright vested in DepED?		D7
D7 Is copyright of all material vested in one party?	D 8	Identify in the IPR Evaluation report required

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D. Redevelopment of resources: Modification and redesign *A resource is created using the content of a previous version of a resource and where necessary new content is created.*	**Yes** *Check all that apply (X)*	**No** *Check all that apply (X)*
		permissions to be cleared.
D 8 Is DepED authorized to modify the copyrighted LR/TR/PDM for purposes of instruction and or training?	D 9	Identify in the IPR Evaluation report required permissions to be cleared.
D 9 Is DepED authorized to create derivatives of the copyrighted LR/ TR/PDM for purposes of instruction and or training?		Identify in the IPR Evaluation report required permissions to be cleared.
D 10 The LR/TR/PDM may be modified and redesigned after successfully passing all other required evaluations.	Prepare IPR Evaluation Report The minimum set of rights metadata for modifying the LR/TR/PDM is documented in the IPR Evaluation. Copyright owner, Entity parties, License agreements Address and contact details of copyright owner Conditions/restrictions for modification and redevelopment.	

E. IPR Guidelines and checklist for new and redeveloped and digitized LR/TR/PDMS to be included in LRMDS repository.

Instructions:

3. The following Guidelines and Checklist refer to new and redeveloped LRs/TRs/PDMs that are to be reproduced, catalogued or uploaded in the LRMDS
4. Section E should be completed by the Division/Regional LRMDS personnel responsible for metadata.

E. Design and Develop	**YES**	**NO**
E.1. The redesign and development work including all the new content creation is without infringement/offense from the original copyright.	E 2	Do not reproduce or catalogue Review content for IPR conformance
E.2. Has permission been granted from the third party copyright owner for all third party content included in the resource?	E 3	Do not catalogue. Seek permission and acknowledgement requirements for all third party

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		content included in the resource.
E. 3 Copyright information, acknowledgements are documented in the resource	E 4	E 4
E. 4 Copyright information, acknowledgements can be documented in the metadata	E 5	Do not catalogue or upload resource to LRMDS
E. 5 Complete Rights metadata	The minimum set of rights metadata for the LR/TR/PDM is documented in the Rights Elements of the Metadata. Copyright owner, Entity parties, License agreements Address and contact details of copyright owner Conditions/restrictions for modification and redevelopment.	

F. Maintenance of LR/TR/PDMs catalogued and included in LRMDS

Section F is completed annually by the LRMDS Region QA Team

Specifications			
F. Maintenance	**Yes**	**No**	
F.1 Annual review and incorporation of new and existing legal requirements for IP rights completed.	Record of all LR/TR/PDM IPR update filed with LRMDS Manager.	Identify LRs requiring IP rights updates	

G. Publication of LR/TR/PDMs catalogued and included in LRMDS

Section G is completed by the LRMDS Administration and Publication personnel prior to the publication of the LR/TR/PDM.

Specifications			
G. Publication and Cataloguing	**YES**	**NO**	
G.1 The minimum set of rights metadata for digitizing LRs/TRs/PDMs is documented	Copyright owner, entity parties License agreement dates Address and contact details of copyright owner Conditions of use included in metadata.		

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9.4 LRMDS Accessibility Specification

What is accessibility?

Learners bring different capabilities, experiences, and motivations to formal or alternative learning situations/environments. Regardless of age, intellectual/physical abilities, preferred modality of learning, gender, social and cultural orientation and/ or geographic location, all learners must have reasonable access to a variety of instructional resources necessary for them to achieve in an efficient and effective manner, prescribed basic education and personal life-long learning goals.

Learning from instructional materials, particularly predominantly print materials, however, can be seriously impeded by various forms of disabilities. The obstacles to access can compromise a learner's ability to succeed academically or pursue a career.

A learning disability is a neurological disorder and is not synonymous to not being bright, intelligent or smart. The learning disabled have difficulty reading, writing, spelling, reasoning, recalling and/or organizing information without interventions in terms of strategies or customized instructional resource. http://www.ldonline.org/ldbasics/whatisld. Since a learning disability is a lifelong issue, access to appropriate learning resources early on is critical.

In addition to learning disabilities, there are other disabilities, such as, mental retardation, autism, deafness, blindness, and behavioral disorders. While these are not learning disabilities, learners with these conditions are the targets of accommodations and other provisions for special education.

Access problems also exist in relation to lack of educational opportunities caused by economic, gender, social, cultural reasons, peace and order conditions, or limited proficiency in the language of instruction. The learners whose access to educational resources is compromised by these factors are NOT the targets of the Accessibility Principles and Measures in this section. Their needs are addressed within the General Education principles.

The development of this specification for Accessibility has been guided by CAST Universal Design for Learning; http://www.cast.org/publications/UDLguidelines/version1.html and Accessibility Specification for Content Development, The Learning Federation, Australia. http://www.thelearningfederation.edu.au

Purpose

The purpose of developing specifications and requirements for Accessibility is to guide the Department of Education in the evaluation and assessment, procurement, development and production, and utilization of learning resources appropriate for learners with special requirements as a result of varying neurological, cognitive, and/or physical difficulties.

To help learners with neurological, cognitive/physical difficulties achieve prescribed learning goals in the context of inclusive instruction

To ensure that learners with special needs have access to basic curriculum resources equivalent to those provided for in regular education

To ensure that teachers have access to teaching and staff development resources that can support differentiated learning and the implementation of the policy of inclusive education

Obligations

1. Disseminate information on the principles and specifications for Accessibility to the educational community and other stakeholders

2. To validate the principles and specifications for Accessibility with professionals and other associations advocating for the educational needs of special learners

3. Revise/update the specifications after consultations with stakeholders and professionals involved in special education.

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Maintenance and usage

The principles and specifications to improve access of learners with special needs to basic curriculum resources will be reviewed annually by a task force created by the TWG NLS for this specific purpose. The task force will be composed of general, subject area and special education supervisors from both private and public education sectors with CO (Bureaus and IMCS), Regional, Division and school (if possible) level representation. The Accessibility principles and specifications will be reviewed, revised and endorsed by the task force to the NLS which will submit the same to the three bureaus for approval.

The principles and specifications are intended to guide teachers and instructional resource developers in modifying existing, previously evaluated resources to render them more **accessible** to learners with varying needs or in designing new resources to meet the needs of special learners in an inclusive environment.

Conformance

The principles and specifications form part of the LRMDS specifications and constitute the conformance version of its Accessibility Specifications at the time of publication to the LRMDS portal.

The Regional LRMDS Manager will lead the LRMDS regional and division team review of the principles and specs every two years or earlier as required by DepED policy. Proposed revisions will be submitted to NLS TWG or other designated CO unit for approval.

Principles

Legal/ Administrative Compliance

At the minimum, learning resources must demonstrate compliance with existing legislation or administrative issuances on providing or improving authentic access to a wide variety of learning resources for Filipino learners with special needs.

(The Learning Federation, *Accessibility Specification for Content Development*)

Learner Focus

Resources must be appropriate (flexible and adaptable) to the needs of those with learning disorders and of those educable learners with physical and other forms of disabilities.

(The Learning Federation, *Accessibility Specification for Content Development*)

Delivery/ Access and Utilization

Delivery/Access and Utilization - Learning resources must be deliverable/ accessible in various formats and adaptable to a variety of instructional settings or learning contexts to suit the needs of those with learning difficulties and of those educable learners with physical and other forms of difficulties.

DepED. ICT Integration in Basic Education Guidance & Template)

Measures and requirements

Legal and Administrative compliance

Legal/ Administrative compliance	**Measures**	**Specific Indicators**
	Supportive of laws relevant to improving access for learners with special needs and DEP ED policies on Special Education, language of instruction	The material can be translated into mother tongue as required
	Knowledge/skills/attitudes/values compliant or aligned with the ap-	Knowledge/ skills/ attitudes content of the instructional resource are in

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	proved curriculum	compliance with or can be demonstrated to be aligned with the curriculum
	Reproduction, modification and use of resources are compliant with generally accepted IPR practices and with specific international agreements to which the Philippines is a party	Reproduction and or modification of the learning resource comply with international agreements, local IPR laws and other generally accepted intellectual property rights practices

Learner Focus

Flexibility and Adaptability: The LR should be accessible and appropriate for individuals with different backgrounds, learning styles, cognitive abilities and disabilities in widely varied learning contexts which may include the following options.

The learning resources must provide alternative/ multiple means of representation, expression and engagement.

Varying/multiple representations

Perceptions:

- customize the display of information
- provide alternatives for auditory information
- provide alternatives for visual information

Language and symbols:

- options to define vocabulary and symbols
- options to clarify syntax and structure
- options to help decode text and mathematical notation
- options promote cross-linguistic understanding illustrate key concepts

Comprehension:

- provide or activate background knowledge
- highlight critical features, big ideas, and relationship
- guide information processing options that support memory and transfer
-

Varying/multiple expressions

Physical actions:

- mode of physical response
- accessing tools and assistive technologies

Expressive skills and fluency:

- media for communication
- tools for composition and problem solving options in the scaffolds for practice and performance

Executive functions:

- guide effective goal-setting
- support planning and strategy development
- facilitate managing information and resources options that enhance capacity for monitoring progress

Varying/multiple Engagement

Recruiting interest:

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- increase individual choice and autonomy
- enhance relevance, value and authenticity reduce threats and distractions

Sustaining effort and persistence:

- heighten salience of goals and objectives
- vary levels of challenge and support
- foster collaboration and communication increase mastery-oriented feedback

Self-regulation:

- guide personal goal-setting and expectations
- scaffold coping skills and strategies develop self-assessment and reflection

Varying Access and Utilization

1. Can be used in varied instructional settings: self-paced, independent, teacher-facilitated, peer or group
2. Instructional materials can be used in varied settings
3. Can be easily transformed into different formats
4. Alternative formats are available as appropriate
5. Intuitive, logical, easy to use and navigate
6. The LR materials respond to or in accordance with accessibility user profiles
   - visual impairment
   - hearing impairment
   - physical impairment
   - cognitive impairment

Guidelines

In **purchasing** instructional resources to meet special learning needs, applicable IMCS standards and requirements should be satisfied. In addition, (1) Intellectual Property Rights clearance (refer to Guidelines and Specifications for LRMDS IPR MANAGEMENT) should be ensured and where possible and/or desirable the technical format of the instructional resource intended for purchase should be capable of being rendered into multiple presentation formats (properly formatted Braille, Digital Talking Book, etc.). The resources to be purchased in relation to meeting special needs should provide equivalent learning as those resources prescribed for regular learners to meet the needs of the basic curriculum.

2. For **evaluating and cataloguing resources**, refer to **Education Soundness Specifications**

3. For **digitizing and modifying, design and development of new instructional resources** to meet special education needs, refer to IPR Management procedures and technical specifications, that is, if the instructional resource intended for modification is capable of being rendered into multiple presentation formats (properly formatted Braille, Digital Talking Book, etc.) before considering the specific indicators for Accessibility.

4. Consider the measures and specifications to **modify,** and for the **design and development of new instructional resources** indicated in this document less as prescriptions and more as a set of strategies that can be employed to overcome or minimize the barriers inherent in most existing print curricular materials. The specifications are recommended for the design and development of new instructional resources, to ensure that the instructional resource is more flexible and may accommodate learners with special needs in an inclusive environment.

Principles, Measures and Specifications Evaluation Instrument

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Digitizing and modifying, design and development of new instructional resources

Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
Provide Multiple Means of Representation	**Options for perception:** Display/presentation of information is appropriate to learners with auditory, visual impairments				
		Hearing impaired:			
		Dialogue in video materials have text equivalent in the form of captions			
		Sounds in video materials have equivalents in the form of visual effects or alerts			
		Visually Impaired:			
		There is appropriate contrast between background and text and images			
		Multimedia materials - There are sound equivalents for visual effects and alerts			
		There are touch equivalents for key visuals, physical objects and spatial models			
		Text- Size of font is appropriate for those with diminished vision			
	Options for language and symbols Inequalities to access arise when information is presented to all students, regardless of their abilities and learning needs, through a single form of representation. An important instructional strategy is to ensure that alternative representations are provided not only for accessibility, but for clarity and comprehensibility across all students.	Various learning disabilities			
		Text demonstrates how complex expressions are composed of simpler words or symbols (e.g. “power – less – ness”)			
		Support for unfamiliar			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		references (e.g. domain specific notation, idioms, figurative language, jargon, archaic language, colloquialism, and dialect) are embedded within the text			
		Support for vocabulary and symbols (e.g. hyperlinks or footnotes to definitions, explanations, illustrations, previous coverage, for electronic resources, there are hyperlinks to online dictionaries, thesauri, etc.; for print materials, contains glossary of terms) are embedded within the text			
		Complex concepts are simplified through the use of multiple examples			
		Text available or translatable to first language or mother tongue of intended users			
		Key concepts presented in one form of symbolic representation (e.g. an expository text or a math equation) are complemented with an alternative form (e.g. illustration, etc.)			
	Options that illustrate key concepts non-linguistically Text is a weak format for presenting many concepts and for explaining most processes especially for students who have text- or language-related disabilities. Providing alternatives like illustrations, simulations, images or interactive graphics – can make the information in text more comprehensible and accessible to learners with special needs	The learning resource provides one or more of the following options:			
		Key concepts presented in one form of symbolic representation (e.g. an expository text or a math			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		equation) are complemented with an alternative form (e.g. an illustration, diagram, model, video, comic strip, storyboard, photograph, animation, physical or virtual manipulative)			
		Key concepts presented in illustrations or diagrams are complemented with verbal equivalents, explanations, or enhancements			
		Explicit links are made between information provided in texts and any accompanying representation of that information in illustrations, charts, or diagrams			
	Options that promote cross-linguistic understanding; Accessibility of a learning resource can be increased when there are options for the language of a learning resource to be explicitly linked with other spoken languages, like the mother tongue of the learners. This is particularly helpful when children are literate in those languages, rather than just orally proficient. Providing clear links between the relationships among different languages allows children to think flexibly and strategically about how they might use their strengths in one language to promote understanding in another.				
		Whenever possible, all key information in the language of instruction (e.g. English) is also available or translated in mother tongue			
	Options for Comprehension Proper design and				

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
	presentation of information; Individuals differ greatly in their skills in information processing and in their access to prior knowledge through which they can assimilate new information.				
		Uses explicit prompts for each step in a sequential process			
		Uses a variety of cognitive strategies (graphic organizers, such as, concept map, organizers, KWL, etc.)			
		Learning design includes ample activities to scaffold comprehension			
	Options for physical action LR provides alternative means of navigation for physical interaction	LR has one or a combination of the following means as appropriate			
		by hand by voice by single switch by joystick by keyboard or adapted keyboard by keyboard commands for mouse action by switch options by alternative keyboards by customized overlays for touch screens and keyboards			
	Options for expressive skills and fluency- LR's contain alternative modalities for expression and fluency such as multiple media, devices, templates, etc.				
		The resource provides learners with varying special needs different forms of expressing themselves competently (e.g. writing, singing, dance, poetry, art, etc.)			
		Provides and/or allows			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		learners with multiple special needs to use a variety of flexible and accessible tools (e.g. learning to draw with a compass, spell checkers for writing assignments, calculators for computing) to more successfully articulate what they know.			
	Options for executive function	LR provides an adequate number of the following strategies or activities:			
		There are prompts for readers to "stop and think" before acting			
		Includes activities that break long-term goals into reachable short-term objectives			
		Uses graphic organizers and templates for data collection and organizing information			
		Contains guided questions for monitoring or templates that guide self-reflection on quality and completeness of work			
		Contains and explains the use of different forms of self-assessment			
	Options for Recruiting Interest	LR has two or more options of activities:			
		LR has varied activities/with varied levels of difficulty/ novelty to choose from			
		Various types of rewards or recognition for effort are available			
		Uses varied contexts or content for practicing skills			
	Options for sustaining learner effort and persistence The resource has activities to help sustain learner effort and persistence	The learning resource provides for combinations of the following options as maybe appropriate:			
		Goals and objectives of tasks are persistently displayed in symbols or enhanced text			
		Has provisions for being used by individuals, and small groups in collaborative			

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Principle	Measures	Specific Criteria Descriptors	Yes	No	Comments
		settings			
		Accepts several levels of acceptable performance			
		Contains prompts that guides learners when and how to ask peers and or to ask teachers for help			
	Options for self-regulation LR provides activities that uses the intrinsic abilities of the learners to regulate their own emotions and motivations	Contains prompts, reminders, guides, rubrics, checklists that focus on:			
		Includes activities in which the learners get timely and understandable feedback from various sources.			
		LR provides access to alternative scaffolds (charts, templates, feedback, displays) to enable user to know how he is progressing			
Delivery/Access /Utilization					
	LR can be used in varied instructional settings	Instructional Materials can be used in one or more of the following settings: classroom, resource room, home, rehabilitation center, community-based center			
		Can be used in varied instructional settings: self-paced/, independent, teacher-facilitated big group, peer			

Glossary of Terms

Special education	Refers to instruction that is specially designed to meet the unique needs of learners with varying forms of disabilities.
Inclusion	Inclusion is defined as 'providing specially designed instruction and supports for students with special needs in the context of regular education settings.' (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*) Inclusion also means providing all students within the mainstream appropriate educational programs that are challenging yet geared to their capabilities and needs as well as any support and assistance they and or their teachers may need to be successful in the main stream (from '*Education of children with Special Needs in the Philippines" by Teresita Inciong*)
Disability	Refers to any restriction or lack (resulting from an impairment) of ability to perform an

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	activity in the manner or within the range considered normal for a human being. (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*)
Universal design for learning	'Universal Design for Learning (UDL) is an approach that addresses and redresses the primary barrier to making expert learners of all students. UDL helps meet the challenge of diversity by suggesting flexible instructional materials, techniques, and strategies that empower educators to meet these varied needs. A universally designed curriculum is designed from the outset to meet the needs of the greatest number of users, making costly, time-consuming, and after-the-fact changes to curriculum unnecessary. The design for learning is built around three major principles: provision of multiple means of representation, provision of multiple means for action and expression, and provision of multiple means for engagement. The recommended principles and measures in this document were adopted from UDL. (*Center for Applied Special Technology, CAST has earned international recognition for its development of innovative, technology-based educational resources and strategies based on the principles of Universal Design for Learning UDL-* *http://www.cast.org/publications/UDLguidelines/version1.html*
Impairment	Refers to any loss or abnormality of psychological, physiological or anatomical structure or function (*Educating Students with Disabilities in General Education classrooms: Research Articles as cited in Module I References- Foundation, Trends, Legal, and Ethical Issues in Special Education*)
Blindness, low vision	*Low vision* is defined as visual acuity of less than 6/18, but equal to or better than 3/60, or corresponding visual field loss to less than 20 degrees, in the better eye with best possible correction. *Blindness* is defined as visual acuity of less than 3/60, or corresponding visual field loss to less than 10 degrees, in the better eye with best possible correction. (*10th Revision of the WHO International Statistical Classification of Diseases, Injuries and Causes of Death*)
Hearing impaired	A hearing impairment exists when an individual is not sensitive to the sounds normally heard by its kind. In human beings, the term hearing impairment is usually reserved for people who have relative insensitivity to sound in the speech frequencies. The severity of a hearing impairment is categorized according to *how much* louder a sound must be made over the usual levels before the listener can detect it. In profound deafness, even the loudest sounds that can be produced by the instrument used to measure hearing (audiometer) may not be detected. There is another aspect to hearing that involves the quality of a sound rather than amplitude. In people, that aspect is usually measured by tests of speech discrimination. Basically, these tests require that the sound is not only detected but understood. There are very rare types of hearing impairments which affect discrimination alone. http://en.wikipedia.org/wiki/Hearing_impaired
Accommodations	Accommodations are alterations in the way tasks are presented that allow children with learning disabilities to complete the same assignments as other students. Accommodations do not alter the content of assignments, give students an unfair advantage or in the case of assessments, change what a test measures. They do make it possible for students with LD to show what they know without being impeded by their disability. *National Center for Learning Disabilities (2006)*
Learning disorder	A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (*United States Department of Education, 2006*).

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9.5 LRMDS Metadata Specification

Introduction

In simplistic terms, metadata is data about data. But it is also an information about all the physical data (either in software or other media formats) and knowledge, including information about the physical data, technical and business processes, rules and constraints of the data, and structures of the data.

Metadata can be used to describe the behaviours, processes, rules and structure of the data and descriptive information.

The focus of the specification is to allow the data within the LRMDS to be systematically searched, stored, catalogued, managed and reused.

Purpose

To provide a metadata schema so that all resources within the LRMDS has relevant information tags to ensure its systematic retrieval, storage and cataloguing, management and reuse. Further, it will allow the efficient development and addition of new resources according to defined standards.

Obligations

The metadata schema must be:

- in itself a standard
- flexible, to allow changes in requirements or user needs
- extensible, to accommodate new types of resources in the future
- scalable, to accommodate new services and a growing population of users

Monitoring and Usage

The metadata schema must be continually monitored to ensure all resources within the LRMDS can be appropriately tagged.

Conformance

The metadata schema should conform to nominated standards eg. IEE-LOM, RDF (Resource Description Framework), Dublin Core.

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Metadata Elements and Sub-elements

LRMDS Metadata template

Instructions for completing metadata for a learning resource, teaching resource, or professional development material.

References:

[IEEE 1484.12.1-2002] IEEE LOM: Draft Standard for Learning Object Metadata. This standard defines a structure for interoperable descriptions of learning content.
http://ltsc.ieee.org/wg12/files/LOM_1484_12_1_v1_Final_Draft.pdf

Dublin Core Metadata Initiative Library Application Profile http://www.dublincore.org/documents/library-application-profile/

The Learning Federation, 2008, ANZ-LOM Metadata Application Profile V1.01
www.thelearningfederation.edu.au/metadata

Category	Element/Item	Element Description	Metadata entry EXAMPLE
General	Identifier	A string or number used to uniquely identify the resource. A globally unique label that identifies this resource. LOM 1.1 DCMI Identifier	Unique identifier that is generated by the system when the metadata is first created..
	Title	The name given to the resource, usually by the creator or publisher DCMI Title LOM1.2 Title	The life and works of Leonardo da Vinci Title including subtitle Leonardo da Vinci: artworks Use sentence case
	Language	The language of the intellectual content of the resource DCMI Language	Filipino English (To be supplemented by a list of languages specific to the Philippines. Also, allow entry of a language not in the list)
	Keywords	Keywords or phrases that describe the resource LOM 1.5 Keyword DCMI Subject	For a mathematics resource modeling strategies for solving arithmetic problems: Counting on Doubling; tens and ones Multiplication Can also contain colloquial terms
	Description	A textual description of the content of the resource, including abstracts in the case of a document or content	In this video clip, the life and works of Leonardo da Vinci are briefly presented. The

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		descriptors in the case of a visual/interactive resource. LOM 1.4 DCMI Description	focus is on his artistic production, most notably the Mona Lisa.
	Primary Media	The physical or digital manifestation of the resource (Note CD, DVD are allowed in both Primary Media and Primary Storage Type, as they could feature a range of resources - clarified by the Resource Type field in Educational category) DCMI Format	CD, DVD, Video Textbook Wall Chart Poster Model Worksheet Flashcards Interactive Lesson Manipulative Other: *specify*
	Primary Storage type	The primary format in which the resource is stored	Digital, Print, Web Based, VCR, VCD, CD, DVD, Audiocassette.
	Accompanying Item	A known relationship between two items DCMI requires LOM 7 Relation	Manual Flash cards Maps Video Include catalogue identifier for all accompanying items that are catalogued.
	Related LR	Other catalogued LR/TR/PDM that are related to this resource. List of Relation, ID, description. Structure where: **Relation** is one of: ispartof haspart isversionof hasversion isformatof hasformat references isreferencedby isbasedon isbasisfor requires isrequiredby **ID** Identifier of a catalogue entry **Description** Free text description of the related resource	Other catalogued LR/TR/PDM that are related to this resource Ispartof LR405 Leonardo da Vinci: artworks is an accompanying text of The life and works of Leonardo da Vinci
	Resource location	If the resource must be obtained externally:	Name: Company, Organization, Institution

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		Details of where the resource can be obtained Structured: Name/Co. Name/Resource Person, Address, URL, email etc DCMI Location	Name: Resource Person Address: URL: Email: Phone:
	External Resource Identifier	A unique identifier for the resource if it is not in the repository. Typically will be an ISBN number, though there may be other possibilities. (Note: This field may be left blank even for a non repository resource, if such an identifier is not available, not known)	ISBN URL
	Publication Date	For externally produced resources this is the actual publication date (not the date it was catalogued) For LRMDS produced resources it is automatically set to the date at which the resource was published (from Life Cycle) DCMI Issued	
Life cycle	Contributors	Structured: Name, City, Country, URL OR Structured: Name, Position in LRMDS, DepED Administrative Unit, email address (Represents the affiliation of the publisher or contributor, for an LRMDS created resource only) LOM 2.3 Contribute	
	Role	Publisher, Author, Editor, Writer, Subject Matter Expert, Instructional Designer, Editor, Consultant, Other: <data entry> (NB Publisher here refers to the LRMDS operative who actually added the final version of the resource to the catalogue - i.e. marked the Workflow Status as Published) LOM 2.3.1 Role	
	Date of Cataloguing/Current Workflow Stage Date	Year (MM/DDYYYY) – (the date is date of cataloguing of final version, i.e. when *Workflow Status = Published*.	

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		If the *Workflow Status* is *not Published*, it represents the date on which the resource entered the currently indicated *Workflow Status*)	
	Workflow status	Workflow Values: Draft, Review, Final, Published.	
	Version	Integer The cataloguer of a resource (complete or partially complete can increment this number).	
Technical	File Format (for digital resources)	The data format of the resource, used to identify the software and possibly hardware that might be needed to display or operate the resource. Not mutually exclusive: *Microsoft Word* *Microsoft PowerPoint* *Microsoft Excel* *OpenOffice Writer* *OpenOffice Calc* *OpenOffice Impress* *Executable (exe)* *PDF* *<Video file types>* *<Animation file types>* *<Image file types>* *Web-Based* DCMI format LOM 4.4 Technical Requirement	
	File Size	File size in MB (allow integer or real, e.g. 2, 3.5) Maximum allowable file size is 5 (MB) The value is automatically entered by the system for resources being uploaded.	E.G 2.3Mb
	Special Requirements OS	Free text entry of Operating System(s) that are the only ones on which this resource will run DCMI format LOM 4.4 Technical Requirement	Refer to LRMDS Technical specifications
	Special Requirements SW	Free text entry of Application Software Packages that are required to run this resource that and are not listed in the technical specifications DCMI format LOM 4.4 Technical	Refer to LRMDS Technical specifications

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		Requirement	
	Special Requirements AS	Free text entry of additional software (such as plug ins) that are required to run this resource and are not listed in the technical specifications DCMI format LOM 4.4 Technical Requirement	Refer to LRMDS Technical specifications
	No. of Pages	The size in number of pages of the resource. Non digital resources only (where relevant) DCMI Extent	455pp
Educational	Education Type	The Skills for the basic education depend on the following sequence of choices: Type (Pre School, Elementary, Secondary, ALS, etc) Professional Development	Elementary
	Grade/Personnel Level	The target audience the resource is intended for: Choice for selection depends on Choice of *Type* (A two-option main menu with sub menus, one for school grades and one for PD levels) LOM 5.5 Educational Intended End User	For learning material for schools, this is grade/level: Pre School, Grades 1-6, Year I-IV, ALS: sub-list (Basic, Elementary, Secondary) For PD this would be level of learner: Principal Teacher Trainer Pre-service DepED staff
	Curriculum area	A standardized list of curriculum areas. English, Filipino, Science, Mathematics, Technology and Livelihood Education, Values Education, Makabayan, Alternative Learning System, Araling Panlipun Specific lists provided depends on Grade/Level selection. LOM 9.1 Classification Purpose.	
	Discipline/subject	A standardized list of subject areas within each curriculum area. Biology, physics, chemistry,	Biology, physics, chemistry, physics, earth science, (This list will be provided for all of the disciplines covered

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		physics, earth science, (This list will be completed for all of the disciplines covered in the curriculum areas.) LOM 9.1 Classification Purpose	in the curriculum areas on choice of *Curriculum Area*)
	Coverage: Topic / Sub topic	This list will be provided for all of the disciplines covered in the curriculum areas and depends on *Discipline/Subject* selected above.	
	Related Topics	In addition to Topic/Sub topic.	
	Objectives	Primary teaching, learning or training objectives of the resource. LOM 9.1 Classification Purpose	
	Skills	See Subject. Each set of skills will be of the following form: Strand S1 Competency C1 Sub-competency C1.n Measurable outcome that the user can be expected to achieve after using the resource. (What the user will know and be able to do) A three-option main menu, with sub menus, one listing DepED BEC approved curriculum competencies, one listing NCBTS competencies, one listing competencies for non teaching DepED staff. LOM 9 Classification Purpose	E.G. S1 Basic Processes in Science C1. Relate how science and technology affect.... C1.1 Give examples of Science and Technology activities.... C2.
	Duration	Days/Hours/Minutes potentially required to use the resource. (any combination can be specified, any or all can be left blank: because it is not always meaningful to attribute a duration to all learning resources) DCMI coverage LOM 5.9	
	Intended user (“audience”)	Educators Learners Not mutually exclusive (suggest two check boxes) Other (free text entry) LOM 5.6 Educational context	
	Accessibility	From the following (not mutually exclusive) list	

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		Gifted Hearing Impaired Visually Impaired Device independence Cognitively Impaired SARDO (Students at risk) LOM 9 Classification 9.1 Purpose " accessibility restrictions"	
	Primary Educational Use	Learning Materials Teacher-Professional Training Development Material: Lesson Plan / Guide Learning Guide Learning Module Full course Assessment/Tests (not exhaustive - more to be added) LOM 5.2 Resource type	
Rights	Copyright	Y/N Option Y/N DCMI 1.1 Rights	
	Copyright Owner	Structure: Name/Company Name, Address, email, URL	
	Acquisition	Option Free / Commercial LOM 6.1 Cost	
	Conditions of Use	Full [user has full rights for resource - includes modify, making derivatives] Modify	Refer to Intellectual Property Rights.

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		Derive Reproduce Use Copy [Download/Print] Print only [Print but not distribute] For offline resources, if rights are unknown value is: *Refer to Publisher* (See General category for publisher contact details. LOM 6.3 Rights description DCMI 1.1 Rights	
Meta- Metadata	Identifier	A globally unique label that identifies this metadata record LOM 3.1	
	Catalog	The name or designator of the identification or cataloging scheme for this entry. LOM 3.1.1	
	Entry	Actual string value of the entry. LOM 3.1.2	
	Contribute	Those entities that have affected the state of this metadata instance during its life cycle. Includes Role; Entity; Date LOM 3.2	
	Metadata scheme	The name and version of the authoritative specification used to create this metadata instance. LOM 3.3	
	Language	Language of this metadata instance. This is the default language for all language strings. LOM 3.4 ISO 639 language code	

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10 References

Atkins, S and Jones, D. 2004. *Considerations for Learning Design.* The Learning Federation, Curriculum Corporation. http://www.thelearningfederation.com.au/verve/_resources/considerations-learning-design.pdf

BECTA 2006. *Quality principles for learning resources. http://www.becta.org.uk*

Bobby – Usability Evaluation Tool http://www.gregclinton.com/bobby/

British Columbia, Ministry of Education *2002. Evaluating Selecting and Managing Learning Resources*: *A Guide*.. http://www.bced.gov.bc.ca/irp/resdocs/esm_guide.pdf

CAST Universal Design for Learning Guidelines v1.0
http://www.cast.org/publications/UDLguidelines/version1.html

CAST Universal Design for Learning Guidelines v1.0

http://www.cast.org/publications/UDLguidelines/version1.html

Code of Fair Practices in Fair Use for Media in Literacy Education

http://www.centerforsocialmedia.org/resources/publications/code_for_media_literacy_education/

DepED, *Manual of Procedures for the Procurement of Goods and Services (RA 9184)*

Evaluating Websites criteria and tools- Cornell University

http://www.library.cornell.edu/olinuris/ref/research/webeval.html

Gagné, RM and Briggs, LJ 1979, *Principles of Instructional Design* (second edn), New York: Holt, Rinehart, and Winston. Cited in Poliovich, M The instructional role of illustrations.
http://www.comet.ucar.edu/presentations/illustra/illustrations/illustrations_new.htm

Harper, B and Hedberg, J 1997, Creating Motivating Interactive Learning Environments: A constructivist view, ASCILITE.

Jonassen, DH 1994, 'Thinking Technology: toward a constructivist design model' Educational Technology, 34(3), 34-37.

Jonassen, DH 2003, *Learning to Solve Problems: An Instructional Design Guide*. Pfeiffer. ISBN 978-0-7879-6437-5

Merriam-Webster Online Dictionar http://www.merriam-webster.com/

Monash University Web Style Guide http://www.monash.edu.au/staff/web/

Online Dictionaries Tagalog Dictionaries online http://www.multilingualbooks.com/onlinedicts-tagalog.html

Philippine Online Dictionary http://www.bohol.ph/diksyunaryo.php

Tagalog –English Dictionary http://www.tagalog-dictionary.com/

The Learning Federation *Specifications*

http://www.thelearningfederation.com.au/for_jurisdictions/content_development_process/learning_objects/specifications.html

Thomas Reeves, Evaluation course http://it.coe.uga.edu/~treeves/edit8350/index.html

Understanding by Design http://www.grantwiggins.org/ubd.html

Western Michigan University Evaluation Centre
http://www.wmich.edu/evalctr/checklists/checklistmenu.htm#create

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