United Nations
Educational, Scientific and
Cultural Organization

Global Media and Information Literacy Assessment Framework:

Country Readiness and Competencies

UNESCO
Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies

prepared by
UNESCO Communication and Information Sector
in close collaboration with
UNESCO Institute for Statistics

United Nations
Educational, Scientific and
Cultural Organization

Supported by
Japanese Funds-in-Trust
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Global Media and Information Literacy (MIL)

Assessment Framework: Country Readiness and Competencies

Published in 2013 by United Nations Educational,
Scientific and Cultural Organization (UNESCO)
7, place de Fontenoy, 75352 Paris 07 SP, Paris, France

ISBN 978_92_3_001221_2

Graphic design: Nancy Hanninen.
Cover design: Nancy Hanninen.
Illustrations: Nancy Hanninen with assistance from Irmgarda Kasinskaite-Buddeberg, Georges Boade, Ralph Catts and Alice Lee.

Typeset by UNESCO
Printed by UNESCO

Printed in France

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List of abbreviations and acronyms

ASL	American Sign Language
CAT	Computer Adaptive Test
CBT	Computer-based Testing
CFT	Computerized Fixed Test
CGM	Consumer-generated media
CPD	Continuous Professional Development
EFA	Education for All
GDP	Gross domestic product
ICCPR	International Covenant on Civil and Political Rights
ICT	Information and Communication Technology
IFJ	International Federation of Journalists
IFLA	International Federation of Library Associations and Institutions
IGF	Internet Governance Forum
IPDC	Intergovernmental Programme for the Development of Communication
ISCED	International Standard Classification of Education
ITU	International Telecommunication Union
MDG	Millennium Development Goals
MIL	Media and Information Literacy
NAT	National assessment team
NSC	National steering committee
NGO	Non-governmental organisation
NSO	National Statistics Offices
PP	Paper-and-pencil
PSU	Primary sampling units
SABER	Systems Approach for Better Education Results
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
URL	Uniform Resource Locator
WSIS	World Summit on the Information Society

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Foreword

The world is changing at a startling pace. Advances in Information and Communication Technology (ICT) during the past decades have enabled us to transform the ways information circulates and, increasingly, the way we interact, access information, communicate, create new knowledge, learn and work.

This transformation has created new waves of opportunities and challenges for freedom of expression, media development and citizens' engagement. While technology has boosted global development, it has also made it even harder for millions of people, not only from emerging economies, but also from developed countries, to engage with media and be part of global knowledge societies. This helps to reinforce inequality between countries, and – within countries – inequality between communities and individuals.

Since its foundation, UNESCO has been at the heart of international thinking about the impact of the changing information, communication, media, and education landscape. The Organization is an advocate of the potential for technology and free, independent and pluralistic media to advance development in a way that enhances the rights of people to be free and empowered citizens. Action must be taken to ensure that these technological advances, the explosion of media, and structural socio-cultural, economic and political changes, benefit all members of society and marginalize no-one.

UNESCO's Global Media and Information Literacy (MIL) Framework serves exactly that goal. It equips policy makers with a strategic framework, supported by evidence-based information, for taking concrete actions to ensure that all citizens acquire media and information competencies. The MIL Assessment Framework provides UNESCO's Member States with assessment tools to evaluate the extent to which their country is ready and able to provide citizens with the necessary MIL competencies. UNESCO, therefore, advocates that MIL be one of the preconditions of sustainable development and that literate use of information, media and ICT tools, including the Internet, will help to ensure that everyone enjoys the full benefits of the Universal Declaration of Human Rights, particularly freedom of expression and access to information.

UNESCO encourages its Member States to make every effort to ensure that all members of society are able to develop and benefit from MIL competencies. It is only by ensuring that all persons have the necessary competencies to take part in knowledge societies that we are, together, able to move the international development agenda forward towards a world where peace, freedom and equality prevail.


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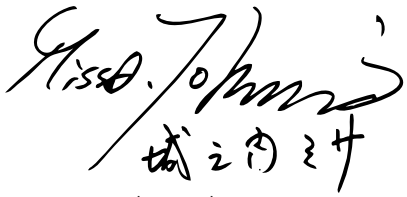
Preface

Each and every individual has within himself or herself a tacit set of unique talents, abilities, and knowledge that hold the key to their future. Just as music is to me an explicit expression of my inner knowledge, skills and attitudes, so too is film to a director, an article to a writer, a business to an entrepreneur, or a game, song or story to a child.

Yet, in an increasingly complex and demanding world, it can be a struggle for a person to use their inner talents to express, communicate and disseminate their ideas and views in the most appropriate, meaningful and effective manner. As parents, citizens, leaders, policy makers or planners in fields such as education, communication and information, we have a duty and responsibility to ensure that young people are given the tools to access information, to create and communicate their unique abilities as explicit forms of knowledge. This would foster a brighter future for young people, and help to nurture the information and cultural heritage of the world as a whole.

It is therefore more important than ever to make sure that students, young people and their educators are media and information literate. Media and Information Literacy (MIL) seeks to deliver to young people, parents, teachers and other citizens the critical competencies they need to harness their unique abilities, in order to flourish in the 21st century and invites countries to take appropriate measures to establish an enabling environment for MIL.

UNESCO's Global MIL Assessment Framework encourages Member States to take concrete actions to help citizens to become media and information literate. It also invites them to assess how favourable the national environment is for MIL initiatives and to determine existing competencies among key social groups, such as teachers in service and in training. In this way, it brings us ever closer to the vision of a world in which all persons may achieve their potential in their personal, professional and societal lives.



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Acknowledgements

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UNESCO Global MIL Assessment Framework benefited from contributions by
Szarina Abdullah, Mumtaza Abdurazzakova, Abdelaziz Abid, Zhyldyz Akayeva, Jose Reuben Q. Alagaran II, Irene Andriopoulou, Natalia Anisimova, Indrajit Banerjee, Joan C. Bartlett, Annie Bélizaire, Rosa Berdigaliyeva, Evelyne Bevort, Albert K. Boekhorst, Elena Bondarenko, Joumana Boustany, Emily M. Brown, Nimfa D. Camua, Toni Carbo, Paolo Celot, Kunjilika Chaima, Sonny Coloma, Belinha De Abreu, Michael Dezuanni, Fay Durrant, Simon Ellis, Irina A. Fateeva, Brian Christopher Findsen, Rosa Gonzalez, Tatiana Jereissati, Ammu Joseph, Sara Gabai, Vladimir Gai, Natalia Gendina, Nancy Graham, Eva Goettert, Paul Hector, Forest Woody Horton Jr., Catherine A. Odora Hoppers, Julia Tami Ishikawa, Trishanjit Kaur, Serap Kurbanoglu, Evgeny Kuzmin, Ann Lourdes C. Lopez, Sharon Mader, Devika P. Madalli, Theophilus E. Mlaki, Susan Moeller, Roxana Morduchowicz, Lyubov Naidenova, Samy Tayie, Chido Onumah, José Manuel Pérez Tornero, Maria Carme Torras Calvo, Daria Tsukanova, Isabelle Turmaine, Boyan Radoykov, Kubashini Rama, Selvarani Sabaratnam, Jagtar Singh, Jane Secker, Dorothy Williams, Carolyn Wilson, Julia Zhang/Xiaojuan, Irina Zhilavskaya, Peter Wallet and Isabel Whisson.

Professors and teachers who contributed with their expertise and time:
Laurie Anne Carr, Alejandro Chao, Patrizia D'Antonio, Claire Fagan, Elena Fumi, Gakinya Gichuhi, Jim Greenlaw, Daw Htay Htay Han, Kamolrat Intararat, Surin Inthanam, Mairi Kennedy, Heather Kerr, Daw Lwe Lwe Khine, Wei Ying Lim, Vu thi Ngoc Linh, Gina Lopez, Sandy Macintosh, Kirsty MacPhee, Nant Mar Lar Than, Angie McCormick, Montanus C. Milanzi, Deograsias Mwoka, Joanna Naw, Keooudom Namsibounheuang, Claire Nelson, Bijan Pant, Ismael Pena-Lopez, Kesone Phetcharern, Boualin Phommasin, Saidi Ramadhani, Cimenna Chao Rebolledo, Viengkhone Saengvilay, Kullatip Satararuji, Souksanh Sayavong, Sunida Siwapathomchai, Oun Sok, Choummaly Souliya, Vanthala Souvanxay, Lynde Tan, Pham thi Thu Phuong, Ngo thi Thu Trang, Phithak Youthasanti, Loise Wambui and Anna Zweede.

UNESCO thanks partners for their contributions and advice in the preparation of this document, particularly the International Federation of Library Associations and Institutions (IFLA), the International Alliance of Universities (IAU) and the Asian Institute of Journalism and Communication (AIJC).

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Executive Summary

Today, information and knowledge are often considered to be the most strategically important resources, and learning the most strategically important capability, for any individual, community, or entire nation. Despite the fact that access to information and knowledge has increased during the last decade due to the higher levels of basic literacy in many countries around the world, significant challenges and obstacles still remain. It is still not obvious how to create a favourable environment for learning, or how to nurture the capabilities of citizens.

Levels of illiteracy are now being increased by the so-called digital divide, which affects not only those who are illiterate, but also those who may be literate, effectively apply their competencies at different stages of their life. And this digital divide is not just physical, material and technical; it also includes knowledge. In order to tackle these challenges and help to bridge these divides, a new approach to literacy is needed that is more situational, pluralistic and dynamic, drawing attention to its information, communication, media, technological and digital aspects.

Media and Information Literacy (MIL) brings together Information Literacy and Media Literacy, along with Information and Communication Technology (ICT) and Digital Literacy, as a new literacy construct that helps empower people, communities and nations to participate in and contribute to global knowledge societies. The adoption of such an approach should be viewed in the light of the greater accessibility, convergence and distribution of information and media content, in various formats and via diverse digital tools. MIL helps to develop critical thinking and problem solving, while also increasing collaboration and participation. This means that every country needs to invest in the creation of an enabling environment for MIL and that citizens need to be equipped with the necessary tools and resources to achieve individual, professional and societal goals that are based on MIL-related competencies.

With Media and Information Literacy, UNESCO is contributing to the promotion of universal human rights and fundamental freedoms, through the provision of access to information and freedom of expression. A media- and information-literate person must not only be a consumer of information and media content, but also a responsible information seeker, knowledge creator and innovator, who is able to take advantage of a diverse range of information and communication tools and media. *MIL is defined as a set of competencies that empowers citizens to access, retrieve, understand, evaluate and use, create, as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities.*

Before they start the process of policy and strategy development, UNESCO urges its Member States first to gather valid and reliable data on the status and availability of competencies on MIL in their country. By being informed about the existing challenges and benefits of MIL, policy makers and decision makers, as well as planners in education, information and communication, will be equipped and empowered to make accurate strategic decisions based on what is most needed in a given situation yet unable to.

The UNESCO Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies offers UNESCO's Member States methodological guidance and practical tools throughout the assessment of country readiness and competencies, particularly of teachers in service and in training, regarding media and information literacy at the national level.

The MIL Assessment Framework adopts a Two Tiers Approach.

The first tier is Country Readiness – providing information on a country's level of media and information literacy and its capacities to uptake MIL-related initiatives. It takes advantage of existing international, regional and national data sources to build a country background profile that highlights the measures of national initiatives that may contribute to the development of individual MIL competencies. This tier comprises five MIL-related categories:

- MIL education
- MIL policy
- MIL supply
- MIL access and use
- Civil society

The second tier is MIL Competencies targeting all citizens, but in particular teachers in service and in training. As teachers are key knowledge gatekeepers, they need to be supported and empowered. Media and information literate teachers pass their knowledge and experience on to their students and, over time, those students will promote MIL and make an impact on society at large. The MIL Assessment Framework includes the MIL Competency Matrix for assessing competencies at the individual and institutional level. MIL competencies can reflect the contextual national factors that facilitate the creation of an enabling and favourable environment for MIL. The MIL Competency Matrix is composed of the following elements:

- MIL components (3)
- MIL matters (12)
- Competencies (12)
- Performance criteria (113)
- Levels of proficiency (3)

The MIL Assessment Framework provides methodological guidance for the national adaptation process, with six phases and various practical tools, as summarized in the Technical Annex of this publication.

On the basis of the assessment results, countries will be enabled to make informed decisions – action oriented scenarios and strategies – for interventions aimed at the further development of MIL, by fostering an enabling environment and enhancing the competencies of their citizens.

About the Publication

This publication is a tangible outcome of UNESCO's institutional and individual partners' work in the area of Media and Information Literacy (MIL). With this document, UNESCO aims to:

- Consolidate a theoretical and conceptual basis for action in MIL;
- Communicate the importance and relevance of MIL assessment to UNESCO's Member States;
- Propose a comprehensive assessment framework that includes methodology, recommendations and tools for the adaptation and application of the MIL assessment instrument at national levels.

The publication is written to provide clear and accessible answers to the following four major questions about UNESCO's Global MIL Assessment Framework:

1. Why is it necessary to assess? – Chapter 1
2. What does it assess? – Chapter 2
3. How does it propose to assess? – Chapter 3
4. What does it propose to do with the assessment results? – Chapter 3.

The MIL Assessment Framework can foster lifelong learning initiatives by building on the relationship between information, media, digital, and ICT literacies, along with societal transformations, education, workforce, policy and decision making processes, economic growth and democracy.

The overall goal of the publication is to guide UNESCO's Member States throughout the assessment of country readiness and competencies regarding the media and information literacy of citizens, in particular teachers in service and in training.

The document is particularly aimed at the following stakeholders: policy makers and decision makers; national officers responsible for statistical data collection and analysis; educational policy makers and planners working in formal and informal education settings; teacher training institutions and teachers. It is also of relevance to the professional information and communication community, and has wide applicability for civil society at large.

The publication is structured as follows: executive summary, three chapters and technical annexes.

Chapter 1 provides a rationale for the development of this Global MIL Assessment Framework for UNESCO. The chapter provides an overview of the changing concept of literacy, interconnections between different types of literacies, their convergence and implications for society. The chapter introduces a new concept and rationale for MIL, and describes its potential benefits for societies, communities and individuals. It also indicates the main requirements that enable the development of a favourable environment for MIL competencies to flourish at national levels, particularly regarding the professional development of teacher competencies on MIL. It also provides a rationale for why countries should consider conducting an assessment of MIL.

Chapter 2 introduces the MIL Assessment Framework. This chapter describes the object of the assessment, its major objectives, structure and other parameters for the measurement of MIL at national levels. It also presents a rationalization and the added value of the integrated two-tiers approach: country readiness and the competency framework for the assessment of MIL at national levels.

Chapter 3 provides methodological guidance and practical recommendations for conducting MIL Assessment at national levels. It also describes the measurement theory for the assessment of country readiness and competencies on MIL in terms of validity and reliability of assessment instruments. The chapter also introduces suggestions for further application of the assessment results.

Furthermore, the publication includes a bibliography, a list of acronyms, a glossary of the major terms used in the publication, and several technical appendices. The guidelines, recommendations and technical appendices form the basis for the practical assessment of MIL, including national adaptation and implementation of the assessment.

It is important to note that this publication is intended as a living document that will be tested, adjusted and adapted by UNESCO to the respective national needs and realities and its intended stakeholders, as listed above.

Chapter 1

Rationale for developing the MIL Assessment Framework

Rationale for developing the MIL Assessment Framework

The major objective of chapter 1 is to present UNESCO's rationale for developing the MIL Assessment Framework. It is presented in three sections.

The first section provides a general overview of the changing concept of literacy, the relationships between different types of literacy in a changing society with emerging challenges, its convergence within and implications for society. It highlights the need for a collaborative and integrated approach with regard to literacies. It sets a theoretical and conceptual foundation for a compound concept of MIL within the context of knowledge societies.

The second section explores potential benefits of MIL for society, the community and individuals and its added value in terms of formulating adequate policies, setting professional standards, mobilizing resources, adjusting training programmes and curricula, as well as empowering citizens to participate in knowledge societies. Building on the conclusions from the previous section, it presents UNESCO's arguments for the development of a MIL Assessment Framework.

The third section introduces key benefits and requirements for creating a favourable environment for the enhancement of MIL competencies, particularly among teachers. This section also addresses the need for accurate and reliable data for informed decision making, and the development of appropriate strategies and programmes.

In brief, chapter 1 provides an answer to the first question:
Why is it necessary to assess?

1.1 Literacy: an evolving concept

Literacy within the context of sustainable development

Literacy is defined as 'the ability to read and write with understanding a simple statement related to one's daily life'[1]. It involves a continuum of reading and writing skills, and often includes basic arithmetic skills. Traditionally, literacy is seen as an aspect of human rights closely linked to the right to education.

There is no single notion of literacy which people possess or not, but multiple literacies. Thus literacy becomes situational, pluralistic and dynamic.

Recently, composite concepts and new aspects of literacy have evolved in a response to changing socio-political, economic and technological patterns, as well as the demands and challenges of the times, especially at the workplace and in society in general (UNESCO, 2008a). These developments have blurred the boundaries and created new synergies among different types of literacy. Consequently, aspects of literacy related to other fundamental rights and societal development, such as freedom of expression and access to information, as set out in Article 19 of the Universal Declaration of Human Rights (United Nations, 1948), become equally important for education, employment, social inclusion, participation, economy and politics.

The United Nations Literacy Decade (2003-2012) ended with a need for a revised vision of literacy, emphasizing the importance of individuals working within their own social contexts and being able to use their literacy skills to navigate and make the best use of social change (UNESCO, 2008a). It was recognized that there is no single notion of literacy, which people possess or not, but multiple literacies. Furthermore, the Decade emphasized that all citizens are engaged in oral, written and virtual/digital practices and are obliged to learn at all stages of their lives. Thus, literacy should become more situational, more pluralistic and dynamic. A more holistic theoretical and conceptual approach is needed, drawing attention to social, cultural, technological, economic and political contexts and how these shape the ways people acquire and use literacy competencies.

However, *being literate – no matter what 'genre' of literacy is considered – is no longer binary: rarely can it be said that one is entirely illiterate or entirely literate*. Rather, it is important to consider all literacies on a continuum: individuals are variously literate, demonstrating differing levels and uses of literacy competencies according to their environments, needs and available resources.

Despite the fact that the world has made steady progress towards the improvement of literacy levels during the last decades, (UIS, 2012) basic illiteracy still exists in many countries and often among marginalized social groups (UNESCO, 2010). A variety of reasons have been put forward and debated at national, regional and international levels.

Recently, attention has been drawn to the so-called digital and knowledge divide (UNESCO, 2006). The digital divide points not only to the physical, material and technical aspects of information and communication technologies (ICT), but also recognizes the impact of a divide between those who can find, manage, create, and disseminate information and knowledge using various technological tools in an innovative and effective manner, and, on the other hand, those who are impaired in this process (EKOS, 2004). Technical developments have led to a shift from a centralized mode of Internet usage (Web 1.0), to a more interactive and socially collaborative mode (Web 2.0) and now towards a new technological breakout (Web 3.0). These developments have changed or are changing the ways people access, receive, evaluate, create and communicate their views and ideas. At the same time, there has been a shift in the educational paradigm from once-in-a-lifetime to continuous learning, with a self-improvement process lasting throughout an entire life. As the living, social and working environment of citizens undergo constant change, there is a need to cultivate new competencies and search for new approaches to literacy.

The growing importance of a virtual world provides not only opportunities, but also implies potential risks and threats. In this regard, the role of emerging literacies, particularly related to information, media and ICTs, has become even more important, as they help to minimize risks related to the reliability of information, privacy, security and ethical issues, and potential abuse by any individual, public or private entity. It is equally important for citizens to understand how information and media content can be accessed, how these contents originate, how they are created, funded, protected, evaluated, and shared. Nowadays, all citizens need to know the functions, roles, rights and obligations of information and media institutions in knowledge societies. They also need to know the potential opportunities and challenges as well as the potential for abuse arising from institutions or individuals that target specific groups or communities, such as the young or elderly, women or men – and any individual in general.

Towards an integrated approach to literacy

Levels of basic literacy are increasing all over the world, but there are still significant challenges when it comes to developing the capabilities of citizens to think critically and creatively, to manage resources effectively, to participate equally and contribute to 21st century societies. Researchers, policy makers, decision makers, education planners, teachers, students and their parents, as well as employers, often ask a fundamental question: what will future society(-ies) look like and what competencies will be needed?

There are many answers to these questions, but one thing is evident – information and knowledge have always been critical for the survival and realization of human beings and for ensuring sustainable development. Since the dawn of human civilization, in every sphere of human activity, access to information, the creation and application of new knowledge and its communication to others have contributed to the evolution of societies and the socio-economic welfare of people. Knowledge about things and how to work with other people have therefore been regarded, since ancient times, as the most precious 'wealth' that humans possess.

Knowledge creation and sharing will undoubtedly continue to play a central role in shaping economic growth, climate change, societal development, cultural enrichment, political empowerment, and the consolidation of democratic systems. Today, information and the means of communication, including media, the Internet and ICTs, are integral prerequisites for engaging in democratic debate, building communities, stimulating innovation and partnering with others. Print and broadcast delivery models and strict copyright regimes no longer characterize access to information and media content. Information is now accessible anywhere, can be created by anybody as user-generated content, and shared at any time to billions of people around the globe.

Furthermore, the current challenges that countries face around the world, including illiteracy, poverty, climate change, financial crises and on-going conflicts, are not linear or one-dimensional,

but are diverse, complex and interrelated. Such complex issues cannot be solved by one institution or sector, or by applying a single and fragmented approach. What is required is a multidisciplinary approach and coordinated efforts at national, regional and international levels.

Information and media of all kinds, across all platforms, have become integrated into modern life, but their presence and influence are not always observed, acknowledged and monitored. Media and information providers, such as Internet information providers, libraries, archives, and museums, wield considerable political, economic, social and cultural power, and constitute powerful agents of change across the world. They are increasingly usurping roles once played by family, community, religion, politics, business and, obviously, education. They are not only disseminating information and knowledge, but are also shaping values and norms, changing attitudes and behaviour, and influencing the lifestyle and working conditions of people.

Novel literacy concepts have evolved during the last decades as a response to the growing power and impact of information, the media, ICTs and the digital world, including: cyber literacy, digital literacy, e-literacy, information literacy, media literacy, news literacy, technology or ICT literacy, and many others. Some of these literacies are more independent, well scoped, and supported by theories and empirical evidence. Others are more novel and interconnected to other compound concepts, such as multi-literacies, trans-literacy, and media and information literacy (UNESCO, 2013a).

Yet, one common feature of these distinct types of literacy is that they all aim to contribute to the emergence of knowledge-based societies. They are seen as of crucial importance for building the 'human resources' of any society and economy. They also all share the common goal of cultivating the abilities of people, particularly in the areas of information, media and ICT. They recognize the important role and functions of media and information providers (e.g. media and information infrastructure) in society, as well as their impact on the public. And finally, they share the same goals of promoting lifelong learning, building productive knowledge societies, facilitating citizens' full participation in society (UNESCO, 2011a) and encouraging good governance and responsible development. As a result of being literate, people should become able to interpret and make informed judgements as skilful users, creators and producers of information and media content in their own right, as well as communicators of experience and aspirations to other members of society.

Certain types of literacy have always been interlinked as academic disciplines; but closer linkages became feasible at a practical level, thanks to the greater accessibility, convergence and distribution of information and content via the Internet, the media, mobile platforms and other means. Media literacy, information literacy, ICT and digital literacy are no longer seen as separate, but as interconnected and overlapping. Over time, the concept of Media and Information Literacy (MIL) has evolved out of these developments, and aims to provide a coherent approach to the new types of literacy in the field of communication and information.[2]

> Cultivation of a media- and information-literate population is essential for the sustainable development of any society.

One of the major reasons for combining these literacies into one compound MIL concept is to equip citizens with the necessary competencies to seek and enjoy the full benefits of universal human rights and fundamental freedoms, particularly freedom of expression and access to information. Secondly, the convergence of technologies has blurred the boundaries among literacies. Thirdly, it is important to shift the focus away from the fragmentation of and differences among literacies towards what they have in common, leading to a broader framework. Finally, there is a growing need for a joint approach to the introduction of recently proposed types of literacy, and how they may be mainstreamed and further developed in personal, educational, professional, and societal settings.

Figure 1 illustrates a path towards an interdisciplinary literacy approach that is relevant not only to information and communication, but also to education, science, culture, economics and other fields. MIL is linked to both the information and learning process (from data to information, knowledge and wisdom) and the decision-making process, using appropriate resources and technology in the most efficient and ethical manner. Data and information – including media content and messages – can be collected, accessed and analysed by relatively anybody, using a range of technologies. New knowledge can, in turn, be created, shared or managed by professionals or non-professionals alike. The application of technology for the processing and management of data and information leads to greater connectedness, professionalism, participation and inclusion and requires critical thinking. It is also increasingly possible to move from one level to another, to understand a range of issues, relations, dependencies, patterns, structures and finally principles, practices and situations.

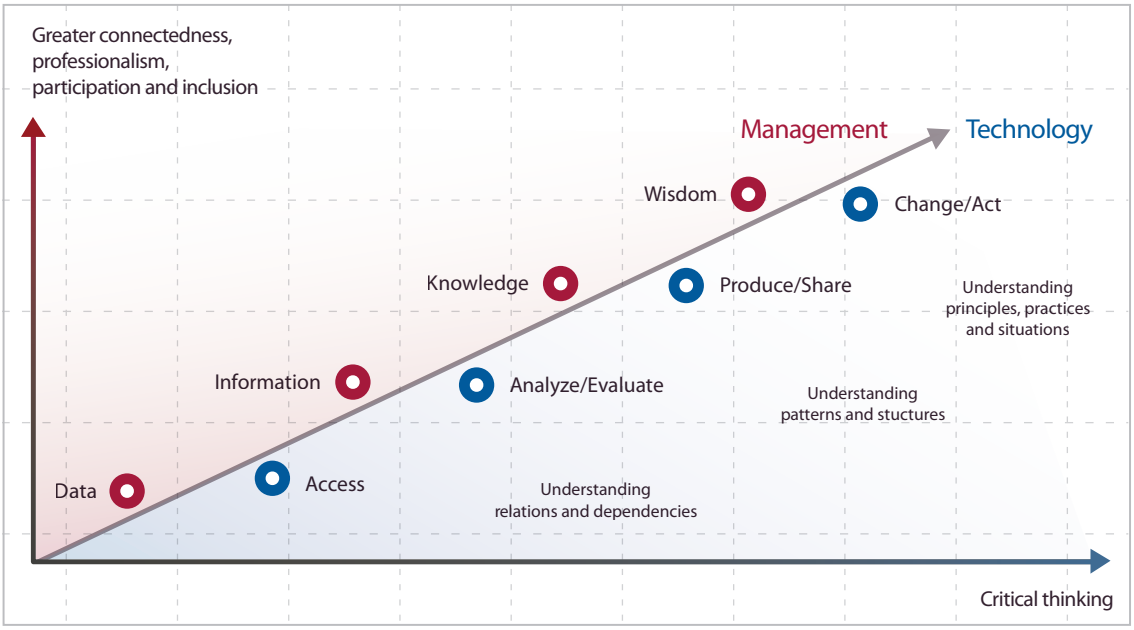

Figure 1: Towards an interdisciplinary approach

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1.2 Media and Information Literacy

In the twentieth century, information literacy and media literacy were regarded as separate and distinct fields. Over the past thirty years numerous studies, conferences and workshops have sought to define the scope of media literacy, information literacy, and, more recently, ICT and digital literacy.

> MIL is defined as a set of competencies that empowers citizens to access, retrieve, understand, evaluate and use, to create as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities.

The research and teaching of information literacy and media literacy have their roots in different academic disciplines. While media literacy originated within media and civic studies, information literacy emerged from library and information science. Historically, information literacy is a well-established field that evolved from education courses and materials for library users. Since 1974, the term information literacy has been used to emphasize the importance of access to information, the evaluation, creation and sharing of information and knowledge, using various tools, formats and channels. Meanwhile, the term media literacy can be traced back to education on the use of screen-based materials, emphasizing the ability to understand, select, evaluate and use media as a leading purveyor and processor, if not producer, of information. In contrast, ICT literacy and digital literacy have their roots in computer science and informatics, with an emphasis on the ability to use particular digital devices, software, and infrastructure. ICT and ICT literacy are often seen as enabling tools for other forms of literacy. Moreover, digital literacy is often used in a similar way to information literacy – in the sense of an ability to effectively and critically access and evaluate information in multiple formats, particularly digital, and from a range of sources, in order to create new knowledge, using a range of tools and resources, in particular digital technologies. Digital literacy therefore becomes essential for governance, citizenship and development in the digital-based knowledge economy. Digital literacy is also closely linked to media literacy, as it helps the user to engage in safe and ethical social networking and collaboration. Similarly, ICT or technology literacy is linked to the skills required to manage information and media content.

In brief, the various types of literacy (media, information, ICT and digital) overlap in terms of:

Objects of interest: Information literacy is concerned with how data and information in any format and form are managed, using different technological tools. Media literacy focuses on the media for good democracy and development. Since the mass media and ICTs are overwhelmingly present in everyday life, less effort is required to search for and retrieve information, as content is provided by media institutions and other producers. There is currently a theoretical and empirical convergence, blending media literacy, information literacy, ICT literacy and digital literacy, that demands a new and combined set of competencies and collaborative mechanisms.

Rights-based approach: All four types of literacy foster the promotion of human rights and fundamental freedoms, particularly freedom of expression and access to information (c.f. the United Nations Universal Declaration of Human Rights, Article 19). Media literacy is particularly concerned with freedom of expression, press freedom and media pluralism, while information literacy underscores the right to seek, receive and impart information and ideas through any media and regardless of frontiers. Digital literacy refers to (digital) information and the openness, plurality, inclusion and transparency of any ICTs, in particular the Internet.

Critical and reflective thinking: The above-mentioned literacies emphasize the critical evaluation of information and media content, as well as requiring an understanding of the functions of media and information providers (products, services and processes) in society.

Cultivation of competencies: All literacies share the common goal of cultivating people's ability to access, evaluate, create and share information and media messages using any means, including ICTs. While it is important to recognize the different respective origins of those constructs, it is evident that they are complementary and compatible.

Impact on personal, social and professional life: The various types of literacy cited above are essential for citizens, children, youth, women and girls, persons with disabilities, indigenous groups and ethnic minorities, as they enable them to be informed, involved and engaged in societal, economic and political development as equal contributors. Information, media content and any digital products/services also have a tremendous influence on personal, social and professional life. Media literacy has strong social connotations, while information literacy is concerned with the creation and use of knowledge, as well as with informed learning processes. Both concepts include the notion of MIL for leisure, particularly using digital ICTs.

Interdisciplinary approach: Information literacy and media literacy help to equip people with the competencies required for 21st century life and the need to deal with the huge volume of data, information and media messages coming from different communication and information platforms and providers. It is logical to combine these constructs (media literacy and information literacy) with other complementary constructs, such as ICT and digital literacy, that could be used to develop a set of competencies that are needed in the new technological environment and that could be jointly facilitated. This integration can help people to participate more easily in the knowledge societies.

MIL should therefore be seen as an evolving construct that has emerged in a dynamic technological, political, economic, social, and cultural environment. MIL is also closely linked to cultural and linguistic diversity as among the cultural competencies that help foster intercultural dialogue and facilitate a culture of peace, tolerance and non-violence.

UNESCO introduced the new concept of MIL into its strategy, thereby bringing together several interrelated concepts – such as information literacy, media literacy, ICT and digital literacy and other related aspects – under one umbrella concept (see Figure 2). The Organization considers information literacy and media literacy, along with ICT and digital literacy, as complementary and united within a compound concept. At the same time, UNESCO acknowledges that those types of literacy are independent, with their own integrity and identity.

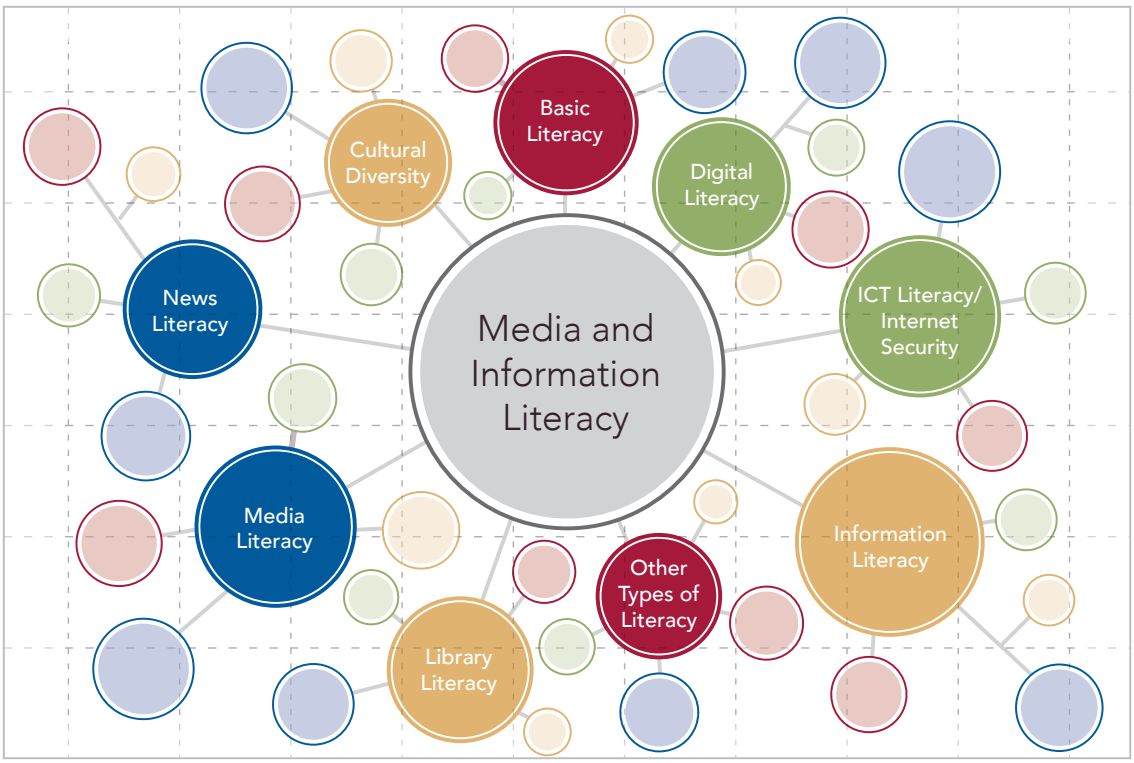

Figure 2: Composite concept of Media and Information Literacy

UNESCO's role in developing MIL

UNESCO's Constitution commits the Organization 'to promote the free flow of ideas by word and image' (UNESCO, 1946). UNESCO is a UN specialized agency that promotes freedom of expression and access to information and knowledge worldwide, based on the recognition of universal human rights and freedoms, as articulated in the Universal Declaration of Human Rights (United Nations, 1948) and in the International Covenant on Civil and Political Rights (ICCPR), and in a variety of other international standards and best-practices (United Nations, 1966).

> The ultimate goal of MIL is to empower people to exercise their universal rights and fundamental freedoms, such as freedom of opinion and expression, as well as to seek, impart and receive information, taking advantage of emerging opportunities in the most effective, inclusive, ethical and efficient manner for the benefit of all individuals.

UNESCO believes that the cultivation of a media- and information-literate population is essential for the sustainable development of any society, requiring the individual person, community, and nation at large to obtain a diverse range of competencies to become information literate and media literate. The rapid growth of ICTs, particularly dominated by the Internet, which in turn is increasingly converging with mobile technology, has opened up new opportunities and forms for the engagement, participation and inclusion of citizens, as well as for learning, governance, economy and culture. The use of ICTs, social networking platforms, the massive acquisition, generation, processing and global sharing of information and media content have created a separate virtual world, or a new reality, which today is guided by principles, values, practices and behaviour other than those of the physical world. In addition, large media and information providers, often as major Internet service providers, along with other global companies, communities and networks, have a direct impact by crossing not only the natural and historical boundaries of national states and geographic regions, but also by entering into everyone's personal, professional and societal life as illustrated in Figure 3.

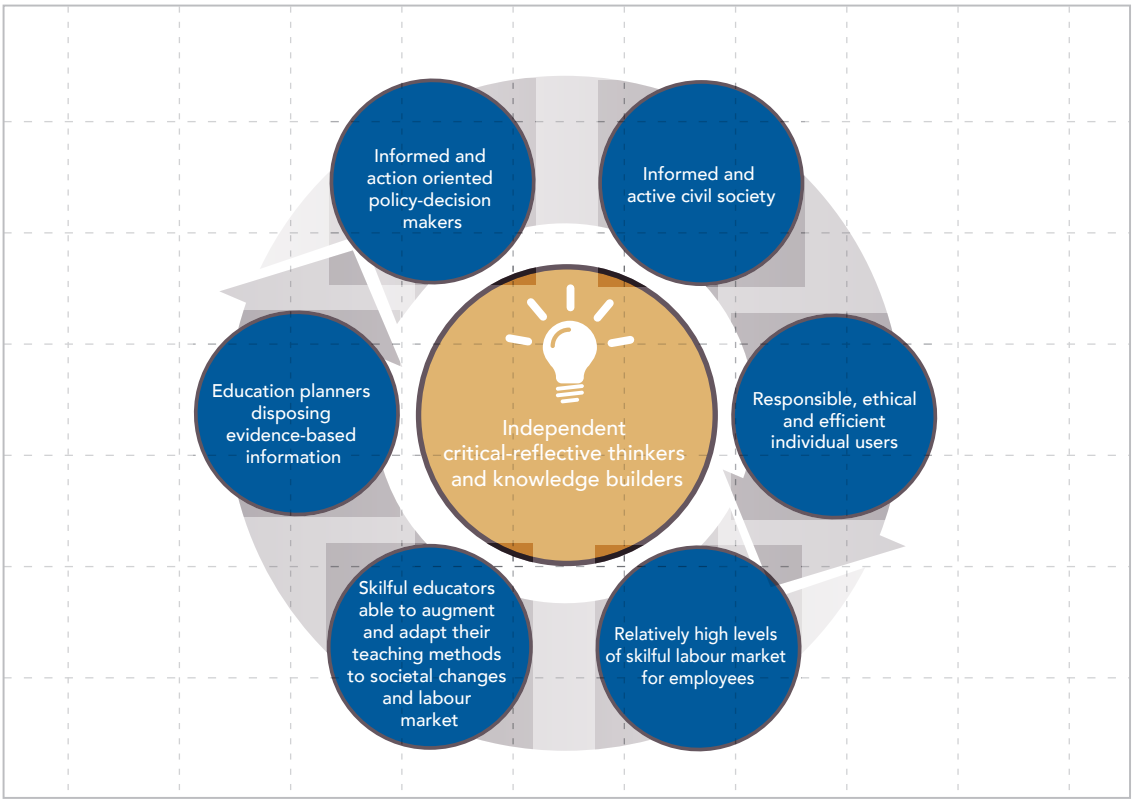

Figure 3: Direct impact of MIL to society

During the last decade, UNESCO's strategy has been devoted to the promotion of a notion of knowledge societies composed of four pillars: education for all, freedom of expression, access to information and cultural diversity. UNESCO supports and encourages its Member States to create an enabling environment, by promoting MIL and taking concrete measures to help their citizens become media- and information literate (Mansell & Tremblay, 2013). One of the first steps in building knowledge societies is to assess the current national status and competencies; this must precede the planning, testing, monitoring and evaluation of any measures that are implemented (United Nations, 2013a).

UNESCO has prepared the present Global MIL Assessment Framework to provide Member States with the appropriate assessment tools, methodology and guidelines to undertake their own MIL assessments.

This Framework is in line with one of the priority areas of the Intergovernmental Information for All Programme (IFAP)[3] – information literacy – and also with the promotion of freedom of expression and media pluralism advocated by the International Programme for the Development of Communication (IPDC).[4] It also contributes to UNESCO's efforts in implementing the Plan of Action of the World Summit on the Information Society (WSIS),[5] the United Nations Millennium Development Goals and post-2015 Development Agenda,[6] as well as Education for All (EFA)[7] and UNESCO's normative instruments, such as its Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003),[8] and UNESCO's Charter on the Preservation of Digital Heritage (2003),[9] Universal Declaration on Cultural Diversity (2005)[10] and other documents listed in the Annex B. The Framework also contributes to the Organization's ongoing work on Media and Information Literacy, such as its MIL Curriculum for Teachers (2011), its Media and Information Literacy Policy and Strategy Guidelines (2013) and other actions.

The MIL Assessment Framework builds on the following declarations: the Moscow Declaration on Media and Information Literacy in Knowledge Societies (2012)[11], the Fez Declaration on Media and Information Literacy (2011)[12], the Paris Agenda - 12 Recommendations for Media Education (2007), the Alexandria Proclamation on Information Literacy and Lifelong Learning (2006)[13], the Prague Declaration Towards an Information Literacy Society (2003), and the Grünwald Declaration (1982)[14].

Since the World Summit on the Information Society (WSIS) in 2003 and 2005, where international and national leaders agreed upon the need to build a people-centred, inclusive, and development-oriented information and knowledge society, MIL has gathered steady support, and is being increasingly recognized as an important area for sustainable development in the post-2015 UN Development Agenda.

MIL echoes the call of world leaders to 'take advantage of new technology, crowd sourcing, and improved connectivity to empower people with information on the progress towards the targets' (United Nations, 2013a). There has been an observable shift away from indicators related to enrolment and completion rates towards those related to the acquisition of new knowledge and the development of new skills. By taking a new angle on education as skills for development, the acquisition of knowledge and skills establishes a closer link to employability, work skills and economic growth (Adams, 2012). It is therefore important to adopt a broader conception of literacy and link it to educational and learning outcomes within a specific context.

1.3 Stakeholders, benefits and requirements for MIL development

This section reviews the potential benefits and requirements of MIL in general, as a new construct of literacies for building knowledge societies. It also looks at the benefits of the MIL Assessment in terms of data gathered during the assessment exercise, as well as potential applications of evidence-based information and the assessment results for future interventions.

When looking at the benefits and requirements of MIL, we will first of all consider policy makers and decision makers as the main stakeholders at national, regional and international levels, then move on to the professional / institutional stakeholders, such as educational planners and teacher training institutions (see Figure 4). Finally, we will consider institutional / individual stakeholders, such as teachers, both in service and undergoing training. The benefits for other stakeholders, such as the research community, civil society, employers and students, are mentioned briefly at the end of the section.

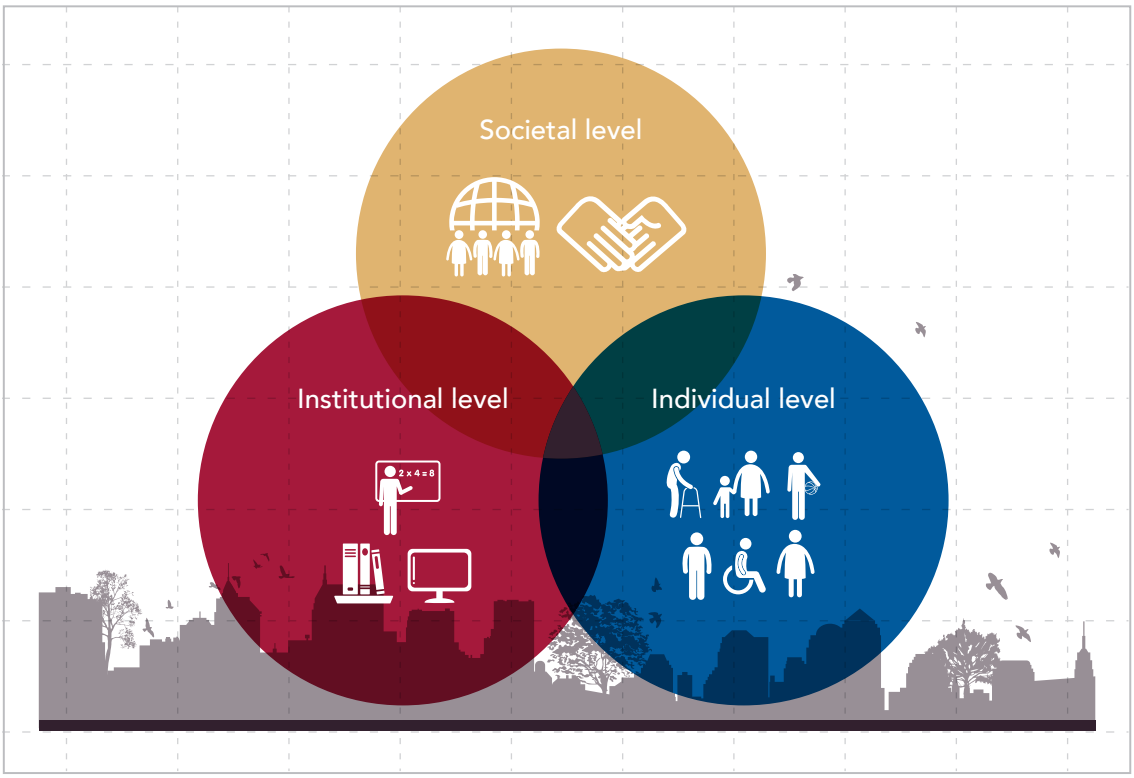

Figure 4. Major levels considered by MIL construct

Benefits and requirements of MIL

MIL is treated as a prerequisite for individuals, communities and nations to enjoy and exercise their universal human rights and fundamental freedoms, in particular: access to information, freedom of expression and the right to education, as articulated in the Universal Declaration of Human Rights. MIL is equally important for the existence of good governance, accountability and transparency in any society, for tackling poverty, economic and societal development (UNESCO, 2013b).

The main benefits are that MIL:

- Fosters respect for and the protection of human rights and freedoms, and empowers all citizens to make informed decisions;
- Provides a comprehensive framework for cultivating a critical mass, among all citizens, of 21st century competencies that are required to respond to new challenges, risks, threats and opportunities, given the significant influence of information, media and ICTs on all spheres of personal, social and professional life;
- Helps to raise awareness, understanding and knowledge regarding the functions of media and information providers in democratic societies; provides understanding about the conditions required to perform those functions effectively and responsibly;
- Helps citizens to acquire the basic competencies required to access information and media content, to evaluate the performance of media and information providers in the light of the expected functions, and to create and share knowledge in an effective and ethical manner.
- Helps to enhance MIL competencies at institutional and individual levels, by creating an enabling environment at national levels. Conversely, the availability of MIL competencies increases demand for an enhanced environment and its associated outputs, such as new content, services and products, as well as employment, intercultural exchange and dialogue, leading to sustainable development and peace.
- Media and Information Literacy improves the teaching and learning process provided by teachers to young citizens by helping them to become independent, critical and reflective thinkers as well as effective, creative knowledge workers.

In order to enjoy the benefits of MIL, the following conditions are required:

- A single literacy approach or basic literacy alone does not support and involve all stakeholders, including policy makers and decision makers, educational planners and the professional community.
- MIL should be considered as a set of competencies composed of knowledge, skills and attitudes.
- All citizens, including marginalized groups, such as people with disabilities, indigenous populations or ethnic minorities, should have equal access to information and knowledge and be able to express themselves.
- The creation of an enabling environment and capacity building for all citizens on MIL are essential for building knowledge societies.
- Special attention is required to provide MIL training to teachers who, as knowledge gatekeepers, significantly contribute to the empowerment of young citizens.

MIL Assessment Framework: benefits and added value for beneficiaries

Defining and measuring a country's MIL readiness and available competencies at national levels should be regarded as a key component of national information and media development policies. This kind of assessment should also be linked to educational plans and can contribute to employment, productivity, innovation, participation and empowerment.

> The MIL Assessment Framework is a unique self-assessment instrument to measure a country's readiness to take up initiatives and available competencies on MIL.

Assessment is an essential first step in the planning, development, monitoring and implementation processes of any intervention; it provides valid and reliable data for strategic decisions, particularly for the development of national policies, strategies and the establishment of conditions and requirements. Without valid and reliable data, policy makers and decision makers may be unaware of existing needs, gaps and challenges. They may also be poorly informed about the means that are available or required to take appropriate and effective measures to achieve the desired goals. Figure 5 illustrates the major stakeholders of the MIL Assessment Framework.

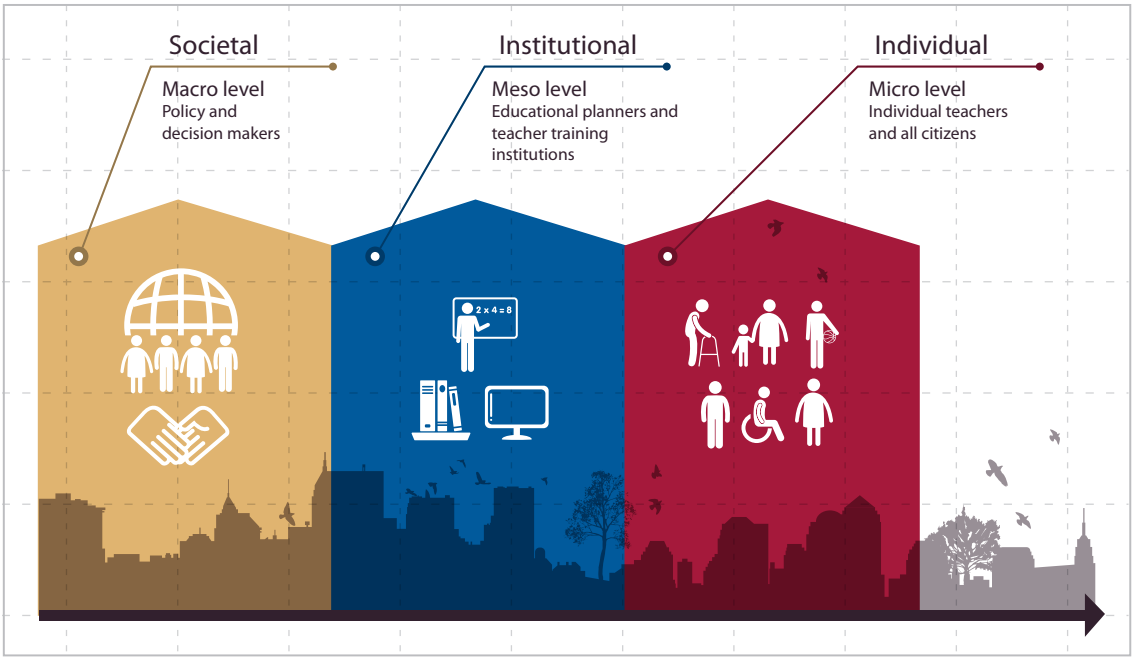

Figure 5: Major stakeholders of the MIL Assessment Framework

The primary stakeholders of the MIL Assessment Framework are

- Policy makers and decision makers responsible for strategic decisions and implementing international commitments in education, information and media policies, ICT development, etc.;
- Educational planners responsible for formulating policies and implementing them in formal and informal education settings;
- Any citizen, particularly an individual teacher, whether in service or in training, and national institutions responsible for the collection and analysis of statistical data.

The secondary stakeholders of the MIL Assessment Framework are:

- The professional community, particularly library, information, communication, media and ICT professionals, as well as researchers and civil society;
- Students at any educational level and any individual citizen/user;
- Employers and industry.

Benefits and value added for policy makers and decision makers

> 'Too often, development efforts have been hampered by a lack of the most basic data about the social and economic circumstances in which people live... Stronger monitoring and evaluation at all levels, and in all processes of development (from planning to implementation) will help guide decision making, update priorities and ensure accountability."
>
> *Post-2015 Development Agenda.*
> *Bali Communiqué of the High Level Panel, March 2013.*

To measure the status of MIL within a country, UNESCO recognizes the need to provide its Member States, in particular policy makers and decision makers, with the appropriate assessment tools, methodology and guidelines to generate valid and reliable data for strategic planning, development, monitoring and implementation purposes. This is why UNESCO initiated the development of a Global Assessment Framework in the area of MIL in 2009, which is now available.

The main benefits of MIL Assessment for policy makers and decision makers are that:

- The evidence-based data gathered using the MIL Assessment Framework and associated tools will provide valuable information on a range of important contextual factors to be considered during the policy planning, development, monitoring and evaluation phases in the achievement of national development plans and international commitments (UNESCO, 2013b).
- Policy and decision makers will be empowered to make informed decisions, develop targeted strategies and allocate resources for specific activities.
- The information gained through the assessment will also increase understanding of MIL issues among all stakeholders at national levels.
- Data generated can serve as baselines, as some of the data to be collected in the MIL assessment will be pioneering (in some countries).
- Future interventions using evidence-based information will be more targeted, focused and needs oriented and their impact will be monitored over the years.

Benefits and value added for educational planners and national professional associations

The MIL Assessment Framework aims to provide information collected both at institutional and individual levels, in particular on country readiness to take up MIL initiatives and on MIL-related competencies[15].

The main benefits of MIL Assessment for educational planners and professional development institutions, such as information and communication professional associations, and teacher training institutions are that:

- It will provide valuable data on the extent of available competencies on MIL issues among their members and related to the existing environment;
- The data will be useful for the improvement of national educational plans and strategies, for setting national competency standards on MIL, the revision of existing professional training programmes, the development of necessary resources and tools, institutional research and any other support required to integrate MIL in teaching and learning processes.
- The data will identify weaknesses, as well as potential synergies, across different subject areas and, as such, will be useful for the improvement of professional training and will contribute to the development of joint literacy strategies.
- Differentiated solutions and scenarios of actions may emerge from the results of the assessment exercise that take into consideration the gender, age, ability, location, experience and area of specialisation of any given professional.

Benefits for teachers in service and in training

The MIL Assessment Framework embraces the goals of UNESCO to ensure that every citizen, from whatever background, is able to access, evaluate, utilize and share information and media content and to create new knowledge, in order to realize his or her full potential. The Organization believes that having media and information-literate citizens helps to achieve the goals of sustainable development, to improve living standards, employment, per capita income, gross domestic product (GDP), industrialization and the development of infrastructure within a country. Literacy enhances the working capabilities of people by providing them with skill development (Patidar, 2010).

UNESCO recognizes that teachers in service and in training are key players in building knowledge societies. In order to teach and prepare young people for tomorrow's world, teachers themselves need to be empowered, their needs addressed and supported. As UNESCO considers MIL an essential part of 21st century competencies, the MIL Assessment Framework intends to provide not only policy makers and decision makers and relevant educational planning and teacher training institutions with accurate and reliable data on MIL, but also to supply individual teachers with tools for self-assessment and self-improvement.

The main benefits of MIL Assessment for teachers are that:

- Policy and decision makers, planners and professional institutions in the fields of education, information and communication supplied with valid and reliable data on existing gaps (in terms of environment and competencies), can initiate special interventions targeting teachers in service and in training.
- After assessment, teachers in service and in training will be better informed about their own level of competencies, and will seek and participate in special training programmes on MIL, in order to improve their teaching and learning and other areas related to their profession.
- Become more aware of the importance and usefulness of MIL for quality teaching and learning and will apply MIL in their classrooms and the training they provide.

Benefits and added value for secondary stakeholders/ target groups

The main benefits of MIL Assessment for *researchers and civil society* are that:

- By having valid and reliable data, MIL-related aspects can be incorporated into research, the development of tools, programmes and projects, as well as raising awareness.
- Civil society will have evidence-based information on country readiness and competencies on MIL for targeted interventions at local, regional and national levels.

The main benefits of MIL Assessment for *students and youth* in general are that:

- The evidence-based data will be focused on teachers who can, in turn, pass their expertise on to students and youth on MIL-related issues.
- Media- and information-literate teachers will help students to achieve 'critical and reflective autonomy' and thus be able to make their own, independent judgements and reflect on the way they consume or produce information, media content and products, as well as know how media and information providers function in society.

The main benefits of MIL Assessment for *employers and industry* are that:

- The evidence-based results can be used to design new products, programmes, tools, services and processes related to media, information and ICTs, as well as to create demands in return.
- A shift in training and learning processes of the younger generation will have a long-term influence on the creation of new jobs, products and services, as the labour market will be more skilled and knowledgeable regarding MIL.

The successful adaptation and application of the MIL Assessment Framework and the exploitation of the evidence-based information collected at regional, national and global levels will depend on the awareness, resources, capacities, commitment and willingness of national partners to address MIL issues in a systematic manner. This will also require the allocation of time and resources, a change of mind set and new managerial skills.

The results of the assessment will point out the strengths and weaknesses of the environment, and existing possibilities for integrating MIL into training programmes, in particular regarding the training of future teachers and upgrading the skills of those already practising in schools. The results of the assessments will also be used to enhance MIL and encourage education planners and teachers to adopt MIL in the classroom, to encourage greater co-operative interaction, collaborative learning, group work and, most importantly, critical and reflective thinking among teachers and students.

The MIL Assessment Framework aims to provide methodological guidance and practical tools to assess the current status of country readiness and competencies of a key target group – teachers. It will specify the necessary elements for improvement at national levels and will set parameters for developing recommendations for teachers on the integration of MIL within teaching and learning processes. Finally, the successful exploitation of evidence-based information on MIL will help to nurture media- and information-literate citizens, who may become both independent critical-reflective thinkers and knowledge builders in society.

Chapter 2

MIL Assessment Framework

MIL Assessment Framework

Chapter 2 outlines UNESCO's Global MIL Assessment Framework, and is composed of four sections.

The *first section* summarizes the major principles underlying the development of the MIL Assessment Framework. It also describes the reasoning behind the Two Tiers Approach proposed for the assessment of country readiness to take up MIL initiatives and to monitor the MIL competencies among teachers in service and in training[16]. This section presents a description of the major objectives and the structure of the assessment framework for the measurement of MIL at national levels.

The *second section* provides details of Tier One – Country Readiness, including the major categories of indicators to be used for the assessment of country readiness and the MIL country readiness model.

The *third section* details the assessment of Tier Two – Competencies. It also introduces the MIL Competency Matrix and its composite elements for the assessment of citizens' competencies, particularly targeting teachers in service and in training.

The *fourth section* summarizes the added value approach of integrated assessment of Tier One and Tier Two proposed for MIL assessment at national levels.

In brief, chapter 2 answers the second question:
What does the UNESCO Global MIL Framework assess?

2.1 Introduction to the MIL Assessment Framework

Major principles of the MIL Assessment Framework

UNESCO initiated the development of the MIL Assessment Framework with the aim of providing its Member States with methodological guidelines and a set of tools to conduct their own assessment of MIL at national, institutional and individual levels.

The following principles were used for the development of the MIL Assessment Framework:

Reliable and valid data for informed strategic decisions

The MIL Assessment Framework is a systematic data collection instrument to be used by policy makers and decision makers, educational institutions, information, communication and ICT policy planners for assessment, planning, evaluation and monitoring purposes. Strategic decisions need to be made on the basis of valid and reliable data, collected through a credible assessment process. Without such baseline data it is difficult to determine and address needs and challenges and to close any gaps. Valid and reliable data about the current status of MIL, the available resources and competencies environment and how favourable the environment is to MIL, can be of great use in developing and implementing appropriate solutions. The assessment, then, refines and improves the planning process and identifies appropriate interventions.

Representative and diverse data reflecting current status

If appropriate policies and strategies are to be developed, as well as concrete initiatives, evidence-based information is needed that is representative, diverse and varied and which reflects the current reality. To obtain this information, the MIL Assessment Framework has adopted a two-tiered-approach (see below). This approach is based on the assumption that the kind of environment needed to foster MIL may vary from one country, region or sector to another. Citizens' competencies on MIL – determined by their attitudes, values, knowledge and skills – might also vary from one social group to another, or within a group, according to gender, age, location and special needs. By using a range of analysis parameters, the MIL assessment is expected to provide representative and diverse, evidence-based data for the development of initiatives that, at a later stage, can engender desirable outcomes for socio-cultural, political and economic development.

Assessment results that are relevant and transferable to national and local contexts

Literacy is shaped by social, economic, political, and technological developments, as well as societal institutions – such as the family, community, workplace, religious establishments, policy makers and decision makers, industry, civil society and the state. Literacy is not uniform, but is, instead, culturally, linguistically and even temporally diverse. Constraints on the acquisition and

application of literacy lie not simply in the individual, but also appear in relations, dependencies, patterns, and structures, as well as shared principles and practices in different situations of life. Literacy, in effect, is not only dynamic, but also linked to performance. Accordingly, socio-cultural contexts profoundly shape the evolving understanding of the concept of 'literacy.' For this reason, the MIL Assessment Framework emphasizes the importance of the social-cultural contexts of individuals, communities and nations and invites Member States to adapt the assessment tools to their own national level.

Practical and cost-effective assessment process

A step-by-step process for the national adaptation of the MIL Assessment Framework will serve to ensure that the results are not only relevant and useful for the development of national agendas, strategies and plans for action geared towards socio-economic development goals, but are also adequately resourced and efficiently managed. The MIL Assessment Framework is, then, a practical instrument to be used for replication and scaling up. Knowing that countries have unequal access to ICTs and the Internet, several delivery modes should be proposed for the assessment, ranging from a paper-and-pencil test, or mixed computer and paper test to computer adaptive testing (to be discussed in Chapter 3).

Main objectives of the MIL Assessment Framework

The **main objective** of the MIL Assessment Framework is to *provide evidence-based information for the planning and development of national policies, strategies and competencies on MIL and the implementation of concrete activities aimed at building knowledge societies*. More specifically, the MIL Assessment Framework aims to provide comprehensive guidance for the assessment of country readiness and the status of competencies among citizens, particularly teachers in training and in service, in the area of MIL. This, in turn, will make it possible to monitor progress and the resources consumed and guide future actions.

Additional goals of the MIL Assessment Framework are to:

- Support Member States' actions in implementing international commitments, such as Millennium Development Goals (MDGs) and contribute to the Post-2015 Development Agenda, Education for All (EFA), the outcomes of the World Summit on the Information Society (WSIS), as well as the strategic directions of the Internet Governance Forum and UNESCO.
- Strengthen national capacities to develop, implement and scale up policies and strategies in communication and information, media, education, and ICT-related areas.
- Provide relevant, accurate and open tools and resources for assessment and teacher training and professional development, so as to enhance the quality and application of competencies in education, information and communication;
- Promote, self-monitor and assess the status, processes and outcomes of competency-based learning in the area of MIL among citizens, particularly teachers in service and in training;
- Facilitate the work of education, media and information institutions as well as other stakeholders at national levels.

Structure of the MIL Assessment Framework: Two Tiers Approach

As contextual factors at the individual, community, institutional and societal levels differ between and within countries, the MIL Assessment Framework acknowledges that different levels of competencies, resources, infrastructure and opportunities exist. Individual competencies depend on a number of diverse and interlinked contextual factors, including the immediate living and working conditions and associated environments (see Table 1). Considering these contextual elements, a 'Two Tiers' approach is considered to be the most appropriate for the assessment of MIL (see Table 2). The Framework is therefore composed of two sets of indicators.

Tier One: MIL Country Readiness

This describes the level and capacity of a country's readiness for MIL initiatives at the national level. It takes advantage of existing international, regional and national data sources, which will be used to build a country's profile. Five categories are proposed: (i) MIL education, (ii) MIL policy, (iii) MIL supply, (iv) MIL access and use, and (v) civil society.

Tier Two: MIL competencies

This describes the competencies and level of proficiency to be obtained by citizens on MIL. Special attention is to be paid to key social groups such as teachers in service and in training and the assessment of their competencies in MIL. In Tier Two, the MIL competency standard is composed of three MIL-related components linked to the MIL subject matters: (i) *access and retrieval;* (ii) *understanding and evaluation;* (iii) *creation and sharing*[17]. In addition, MIL competency is a combination of three cognitive elements: *attitudes* (rights, principles, values and attitudes), *knowledge* and *skills*. These cognitive elements, combined, are more relevant in a complex environment, because they include cognitive, meta-cognitive and non-cognitive factors. Attitudes, knowledge and skills – with regard to various issues, practices, tools and actors – together play an important role in the MIL Assessment Framework, as they do in the learning and teaching processes, and in relation to employment, for participation and empowerment in societal life.

 Literacy	 Competencies	 Environment
Situational	Rights / Attitudes / Values	Technological
Pluralistic	Knowledge	Socio-cultural
Dynamic	Skills	Political-economic

Table 1: MIL Analysis Model

Two Tiers Approach for the Assessment of MIL

A two-tier approach for the assessment of MIL is proposed for the following reasons:

Firstly, the MIL Assessment Framework has been developed to empower policy makers and decision makers, as well as education, information and communication planners and to provide them with *an evidence-based overview of the current status of MIL* so that they can make decisions on MIL. The data collected are to be used for planning interventions and to estimate and allocate resources, depending on identified priority areas and gaps. Policy makers and decision makers, education planners and information and communication professionals will also use the data to align existing policies, strategies, professional standards, curricula and training programmes, as well as to develop new tools.

Secondly, the MIL Assessment Framework will not separately assess media literacy, information literacy and ICT and digital literacy, but, rather, will use identified transversal competencies to make assessments at the individual/institutional *MIL* level. This means that MIL indicators cannot be an amalgamation of indicators of information literacy on the one hand, and media literacy on the other, as well as ICT and digital literacy, as this is likely to result in correlated but conceptually distinct factors. This approach is based on the conviction that information and media content are available in society at every stage of socio-economic development. Despite the fact that many people have limited or no ICT skills and access to digital information, they are still able to access information and communicate with others using traditional tools and means. But in the current digital world, a lack of access to information and media content – because of low Internet connectivity, poor infrastructure and lack of skills – will substantially limit the range of information and media available to any person or community. For this reason, the MIL Assessment Framework takes into account specific considerations, irrespective of the level, availability and form of their ICT or digital information access, and offers various assessment delivery methods (c.f. Chapter 3).

Thirdly, the *competencies of the key social groups will be assessed in terms of the existing environment, resources and infrastructure*. It is expected that the individual and institutional competencies of key target groups, such as teachers in service and in training, will reflect the contextual national factors that could facilitate the creation of an enabling environment for MIL (see Figure 6. UNESCO) acknowledges that teachers, as knowledge gatekeepers, play a crucial role in building knowledge societies. They connect society, institutions and individuals, as they guide, teach and train future workers and agents of change. It is therefore important to ensure that teachers have the necessary tools, resources and required competencies in the area of MIL. For this reason, the MIL Assessment Framework targets teachers in service and in training as a key social group. With that said is important to emphasize that the MIL competency assessment tools could also be used for the assessment of the competencies of other social groups.

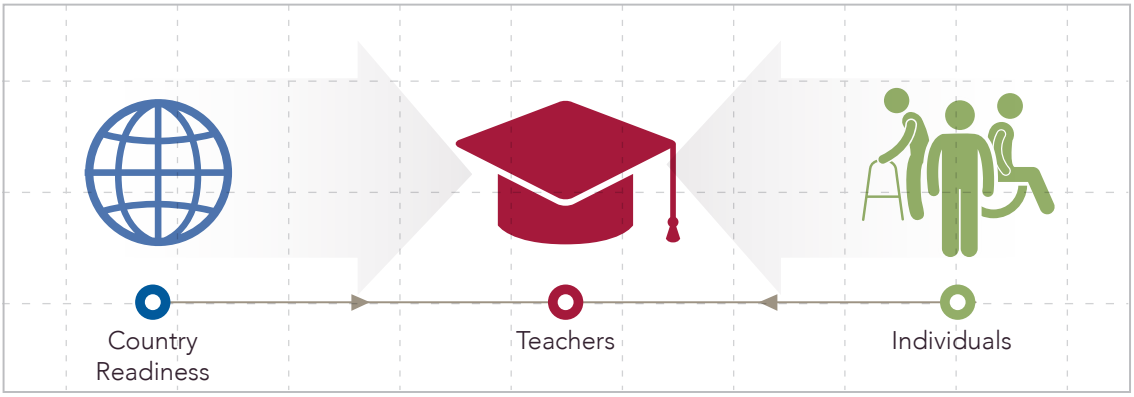

Figure 6: Role of teachers as gatekeepers and providers of knowledge and skills in society

The MIL Assessment should be not seen as a form of mandatory teacher competency assessment. On the contrary, the level of competencies – after stratified random sampling of the teacher population (see Chapter 3) – should mirror system-wide performance and the facilities available at national levels. Furthermore, the assessment is also useful for self-improvement, as part of continuing professional development, especially if it is linked to MIL training programmes for teachers. Indeed, the MIL Competency Matrix (see below and Technical Annex E) could be used for the development of assessment tools targeting other social groups. Competencies and contexts are expected to be positively correlated: high, or advanced levels of competency are found in more enabling contexts. Conversely, lower or less advanced levels of competency may indicate gaps in the MIL context as an enabling factor.

Fourthly, UNESCO emphasizes that, by building an enabling and favourable environment on MIL for teachers, they will be in a better position to perform their professional duties and responsibilities, in terms of providing quality education to their students. Also, *a favourable environment creates new opportunities and demands* for information and media content, as well as for new products and services provided by media or information providers. This will help to ensure the plurality, inclusion and diversity of sources of information, services and products that are available and the participation of all sectors and actors in society, as well as the creation of adequate infrastructure and the allocation of necessary resources. All this can help to improve transparency, accountability and dialogue between the various stakeholders. If teachers do not have competencies in the area of MIL, it is difficult to expect that individuals – whether students or others – will have them.

Major assessment tools

The MIL Assessment Framework offers tools for national assessment by 'providing feedback on a limited number of outcome measures that are considered important by policy makers, politicians, and the broader educational community' (World Bank, 2012). Table 2 lists tools to be provided by UNESCO for the MIL Assessment Frameworks (c.f. Table 2 below and chapter 3).

Tier One: MIL Country Readiness	
Model questionnaires for the background survey	National contextual questionnaire
	Teaching institutions questionnaire
	Individual questionnaire
Tier Two: MIL competencies	
MIL Competency Matrix	Component One: Access and Retrieval
	Component Two: Understanding and Evaluation
	Component Three: Creation and Utilization
MIL Teacher Competency Model[18]	Questionnaire for Paper-Pencil Based Test

Table 2: List of MIL assessment tools

2.2 Tier One - Country Readiness

The term 'MIL country readiness' is used in the MIL Assessment Framework to describe the level of a given country's preparedness to take up initiatives in the area of MIL at national levels.

National contextual data are instrumental for comparative studies within and across countries. Within a country, not all citizens have access to the same facilities and this may influence their involvement and engagement in MIL-related activities. For example, there are often more information sources in urban areas than in the rural areas, while the quality of communication facilities such as Internet, telephone and broadcast services are better in the capital of the country than in the other cities.

The MIL Assessment Framework takes advantage of existing international, regional and national data sources to build a country background profile that highlights the national initiatives that may contribute to the development of individual MIL competencies. An enabling environment for MIL should be created at the national level in order to develop MIL competencies at the individual level. If favourable policies, infrastructure and other enabling factors are not in place, it is unlikely that teachers will have the resources – and, most importantly, the competencies – to equip students with critical 21st century competencies.

Main categories of indicator for the assessment of country readiness

The MIL Country Readiness Profile includes qualitative and quantitative indicators to gauge the preparedness of a given country. The following five categories of initiative have been identified as important for creating an enabling MIL environment at national levels:

- Media and information in education
- Media and information literacy policy
- Media and information supply
- Media and information access and use
- Civil society

The first three categories depend mostly on government actions. Media access and use depend specifically on institutions and individuals themselves, and the civil society category is more dependent on the dynamism of the public and private sectors and a country's other development partners. A model questionnaire for the collection of specific indicators to build the profile was developed for adaptation by respective countries (see Annex B, C, D).

Media and information in education

Quality education for all is recognized as a pillar of sustainable economic development and a healthy society, and is instrumental for the emergence of free, participatory and democratic societies. MIL is among the 21st century competencies that adults, particularly students, need to acquire in order to be productive in their communities and workplaces. Assisting teachers to acquire MIL fundamentals and ensuring that they are confident in transferring MIL to their students would very likely be an investment with a high return for the society. In 2011, UNESCO developed a Media and Information Literacy Curriculum for Teachers (UNESCO, 2011b) that can be adopted and adapted by Member States. Other training programmes, courses and tools are available for teachers on Information Literacy, (Horton, 2013), Media Literacy, ICT and Digital Literacy, as well as other types of literacy. Countries need to introduce MIL as a mandatory competency for secondary schools, in the teacher training curriculum and higher education. There is also considerable support for introducing MIL, according to the age group, at primary and preschool education levels.

The variables for the respective MIL initiatives are:

- The existence of a mandatory MIL course in the official curriculum (by the International Standard Classification of Education, ISCED level), particularly in secondary school and in the teacher training curriculum;
- The existence of training programs to specialise teachers for teaching MIL;
- Specific programmes specialised in MIL studies (by ISCED level).

Across countries, libraries also play an important role in providing training in MIL. The percentage of national public libraries, community libraries, secondary and tertiary schools libraries that organise such training sessions – as well as information providers, particularly Internet information or open and distance learning – may contribute to national initiatives in MIL education.

Media and information literacy policy

Understanding the institutional environment of media and information across countries makes sound, comparative analysis possible. Based on the assumption that MIL can shape educational, workplace, and community settings in important ways, carefully articulated policies and strategies are needed that can be implemented across these settings (UNESCO, 2013b). National MIL policies and strategies are needed to ensure systematic take-up of MIL and, ultimately, will determine the success of other related actions and environmental factors that enable all citizens to have access to MIL. Various countries have already begun defining their own specific start-up conditions, needs, resources, and desired outcomes that have to be addressed by building flexible strategies for MIL. Often, other policies and strategies introduced in education, information, media, and ICT fields help to create an enabling national environment for MIL. Knowing more about the institutional environment of media and information across countries and within a given country, including aspects related to media pluralism, professional standards, independence and diversity will help to articulate and formulate concrete strategies and actions (UNESCO, 2008a).

Media and information supply

The regulatory mechanisms that prevail in a given country determine the supply of media and the quality of information made available to the population. For example, a specific media law that prohibits ownership by private or public operators can explain why there is a lack of independent private or public media in a country. Other laws might introduce centralized censorship. The data here focus on newspapers and broadcast channels (numbers) per type of ownership (public, private, community) with national coverage, and on museums and libraries with an online presence. Data on media with sub-national coverage, while being important at the individual respondent level, do not give as full a picture of geographic distribution as media with national coverage.

While every citizen potentially has access to media with national coverage, the availability of and access to media with sub-national coverage can also be an important factor in a citizen's immediate environment. Similarly, the potential coverage of Internet services (in terms of the population covered) is a more relevant indicator than the number of Internet services providers. What matters is the availability and quality of services to the entire population on both the supply and demand side. This also applies to telephone services: the potential coverage of telephone services (fixed and mobile phone with or without 3G services) is more pertinent than the number of telephone companies. Open data and 'big data' movements are also increasingly shaping the supply side of media and information, as well as use of Internet filters. Indicators on national activities related to open data and resources, particularly Open Education Resources, should be of particular interest when forecasting the orientation of the media and information supply.

Media and information access and use

Access to and use of media and information are two important, but distinct subcategories. Several aggregated national indicators related to access to information and communication technology (for instance, mobile phones per thousand inhabitants, broadband penetration rate, and percentage of households with radio or television receivers, print newspaper circulations, number of Internet users, percentage of households with Internet access, IT labs in education facilities, percentage of households with electricity, etc.) have been identified in the literature as important when gauging a country's preparedness for MIL. The greater the availability of information sources and ICTs in a country, the greater the expected access to MIL and the greater the anticipated need for citizens to acquire new MIL competencies to use those information sources and ICTs effectively. Citizens may perform many MIL-related activities – such as consulting different information sources, retrieving, evaluating and comparing information and making their own final judgement – before taking an informed decision. In other words, access-related indicators are required to gauge the availability of media and information sources in the respondents' zone of residence. Indicators are also required on the use of these facilities and on differences in terms of the information sources available and used within a given country. These are vital to policy makers and decision makers and can help to explain frequencies in MIL usage.

Civil society – 'multi-stakeholderism'

Non-governmental organizations and community-based organizations, academic networks, professional associations and, to a certain extent, private entities are important stakeholders that are active, supportive and engaged in the field of media and information literacy. They provide training, design new products and services for the public on MIL, and may advocate, promote and encourage them to engage in societal activities and partner with various stakeholders (multi-stakeholderism). They also provide specific training to community members, including teachers, and foster their empowerment. However, data on civil society in general are rarely collected, which can be a challenge for the national assessment team. If data on civil society are not available at national levels, it is advisable to start collecting such data.

The MIL country readiness model

With its MIL Global Assessment Framework, UNESCO aims to provide instruments to its Member States for the planning and implementation of MIL-related initiatives. Three main levels have been identified to define a country's MIL readiness (see Figure 6):

- A *very favourable environment*, where all five categories related to the MIL environment are present, well developed and supported at national levels;
- A *favourable environment*, where most of the MIL categories are present, developed and supported, but where some need to be further improved at national levels;
- A *less favourable / unfavourable environment*, where most of the categories related to MIL need serious improvements and where some may not even exist or be invisible at national levels.

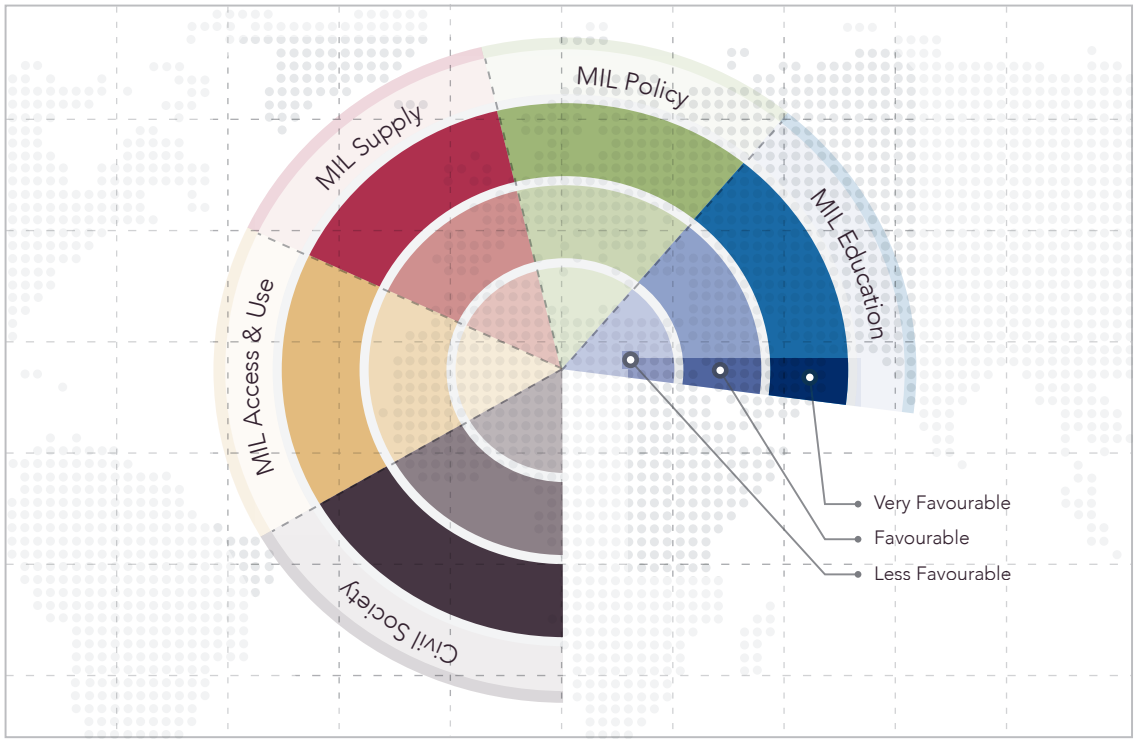

Figure 7. MIL country readiness model

2.3
Tier Two – MIL Competencies

Introduction to MIL competencies

Within the MIL Assessment Framework, media literacy and information literacy competencies, along with ICT and Digital Literacy, are assessed as an integrated-transversal competency. The concept of competency is understood as the ability of an individual to mobilize and use internal resources such as knowledge, skills and attitudes, as well as external resources such as databases, colleagues, peers, libraries, tools, and instruments, among others, in order to solve a specific problem efficiently in a real-life situation. A competency can only be observed within a given situation and context. A competency can be improved over time and located on a continuum that varies from simple to complex. The notions of internal and external resources and real-life situation are key. This set of MIL competencies includes observable outcomes on what people know (knowledge), what people do (skills), and how they use their potential (attitudes and values)[19].

In a given national context, UNESCO encourages the cultivation of media and information literate citizens, paying particular attention to equipping teachers and educators, both from formal and non-formal educational settings first, before expecting that they will be able to teach MIL to students. If teachers demonstrate MIL competencies, and if MIL policies, tools, resources and relevant infrastructures are in place as an enabling environment, the combination, over time, will help to build knowledge societies.

There are three main reasons for assessing teachers: (i) the volume, frequency and sources of information have become important, due to the explosion of ICTs and the development of media. Schools should prepare students to deal with this rapidly changing environment. (ii) People need to develop additional competencies to take full advantage of the knowledge societies. Teachers play a central role in fostering the early development of such competencies in future generations of workers, and (iii) in most countries there are no teachers dedicated to teaching media and information in schools (Karsenti et al., 2012). However, to perform in any discipline, it has become important for the education system to ensure that each teacher is equipped with the necessary MIL skills and competencies to assist and guide students.

MIL Competency Matrix

The MIL Competency Matrix provides detailed information on MIL competencies and their composition, assessing both individual and institutional competencies (including teachers in service and in training). A stratified random sampling method is used for the teacher population, providing data on individual and system-wide performance. This tool could also be used to analyse MIL needs and gaps for other social groups, as well as the results and planning of the follow-up activities, such as developing action scenarios. The MIL Competency Matrix is composed of five elements, as illustrated in Table 3.

MIL component	MIL subject matter	Competency	Performance criteria[20]	Proficiency level[21]

Table 3: Major elements of the MIL Competency Matrix

The three *MIL components* are broad statements directly linked to *MIL subject matters* as illustrated in the Figure 8 and detailed in Table 4.

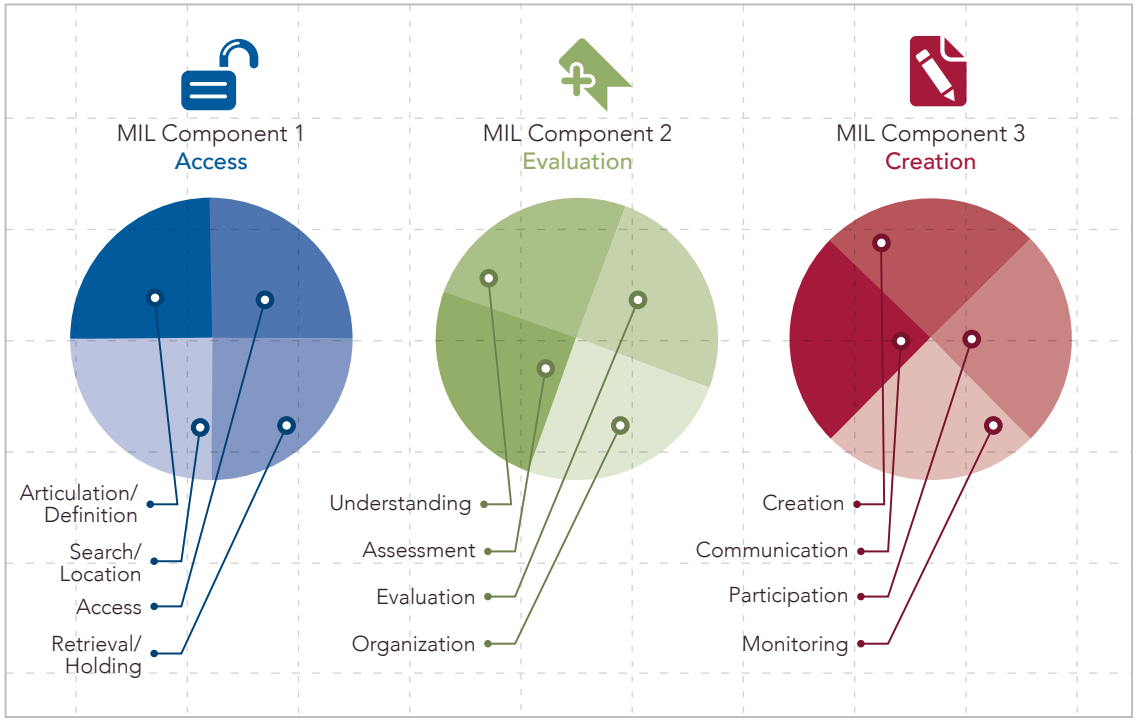

Figure 8. MIL broad components associated to the MIL subject matters

MIL component	
Component 1 Access	Recognizing the demand for, being able to search for, being able to access and retrieve information and media content (Component 1 – Access)[22]. This first MIL component is crucial and is understood as the ability to access, retrieve and store information and media content, using appropriate technologies. It includes the ability to recognize the need for information, media content and knowledge and to be able to identify useful information and media content from all sources and formats, including print, audio, visual and digital to satisfy this need. Retrieval may be from libraries, museums, personal files or any other source, and which may be stored physically or electronically.
Component 2 Evaluation	Understanding, assessment and evaluation of information and media (Component 2 – Evaluation)[23]. This second MIL component is defined as the ability to understand, critically analyse and evaluate information, media content, the work and functions of media and information institutions, within the context of universal human rights and fundamental freedoms. This includes comparing facts, distinguishing facts from opinion, being aware of timing (new/news/obsolete), identifying underlining ideologies and values, and questioning how social, economic, political, professional, and technological forces shape media and information content. It also involves evaluating the quality (accuracy, relevance, currency, reliability, and completeness) of information. Furthermore, in an age of information overload, individuals need also to master the technical skills of organizing, selecting and synthesizing media and information. An understanding of the nature, functions and operations of media institutions, media professionals and information providers is crucial for knowing how to deconstruct information and media messages. It is important to recognize the role of the media and information in the broader context, particularly for promoting freedom of expression, freedom of information and access to information. It will also help to understand the relationship and impact of MIL, citizenship, democracy and good governance. Media and information literate individuals recognize the economic, social and political power and control of media companies and information providers, as well as public institutions.
Component 3 Creation	Creation, utilization and monitoring of information and media content (MIL Component 3 – Creation)[24]. This third MIL component is defined as the ability to master the production know-how of information, media content and new knowledge and effectively communicate with others. It also includes ethical and effective use of information, media content and in general knowledge for instance intellectual property aspects. Being media and information literate not only means being equipped with analytical and production skills, but also requires knowledge about the media and information, and requires the attitudes and values to use media and information and ICTs in an ethical manner. MIL citizens are also those who participate in and monitor democratic processes. The 21st century offers new ways to be creative and innovative as well as collaborative: with Web 2.0 Internet applications, everyone with adequate ICT access and skills can produce, share, network and monitor information and media messages. Media production and knowledge creation, as well as use and impact monitoring, are therefore key elements of MIL.

Table 4. Description of MIL components

A range of MIL subject matters are defined and proposed, based on three broad MIL components (in total 12) in the table 5.

MIL component	MIL subject matters
1. Recognizing the demand for, being able to search for, being able to access and retrieve information and media content	1.1. Definition and articulation of a need for information
	1.2. Search for and location of information and media content
	1.3. Access to information, media content and media and information providers
	1.4. Retrieval and holding / storage of information and media content
2. Understanding, assessment and evaluation of information and media	2.1. Understanding of information and media
	2.2. Assessment of information and media content, and media and information providers
	2.3. Evaluation of information and media content, and media and information providers
	2.4. Organization of information and media content
3. Creation, utilization and monitoring of information and media content	3.2. Creation of knowledge and creative expression
	3.2. Communication of information, media content and knowledge in an ethical and effective manner
	3.3. Participating in societal-public activities as active citizen
	3.4. Monitoring influence of information, media content, knowledge production and use, as well as of media and information providers

Table 5: MIL components and its associated with MIL subject matters

Competency, as a MIL competency standard, is used to describe levels of individual competencies with respect to MIL (Table 6). The MIL Assessment Framework proposes 12 major competencies, which are related to the broad MIL components and subject matters mentioned above. It is important to point out that UNESCO does not set a MIL competency standard, but provides suggestions for the national institutions, which may decide to set a national standard on MIL competency.

MIL component	MIL subject matters	MIL Competency Media and Information literate person is able to:
1. Recognizing the demand for, being able to search for, being able to access and retrieve information and media content	1.1. Definition and articulation of a need for information	1. Determine and articulate the nature, role and scope of the information and media (content) through a variety of resources.
	1.2. Search and location of information and media content	2. Search and locate information and media content.
	1.3. Access to information, media content and media and information providers	3. Access needed information and media content effectively, efficiently and ethically as well as media and information providers.
	1.4. Retrieval and holding / storage / retention of information and media content	4. Retrieve and temporally hold information and media content using a variety of methods and tools.
2. Understanding, assessment and evaluation of information and media	2.1. Understanding of information and media	5. Understand necessity of media and information providers in society.
	2.2 Assessment of information and media content, and media and information providers	6. Assess, analyse, compare, articulate and apply initial criteria for assessment of the information retrieved and its sources, as well as evaluate media and information providers in society.
	2.3. Evaluation of information and media content, and media and information providers	7. Evaluate and authenticate information and media content gathered and its sources and media and information providers in society.
	2.4. Organization of information and media content	8. Synthesize and organize information and media content gathered.
3. Creation, utilization and monitoring of information and media content	3.1. Creation of knowledge and creative expression	9. Create and produce new information, media content or knowledge for a specific purpose in an innovative, ethical and creative manner.
	3.2. Communication of information, media content and knowledge in ethical and effective manner	10. Communicate information, media content and knowledge in an ethical, legal and effective manner using appropriate channels and tools.
	3.3. Participating in societal-public activities as active citizen	11. Engaged with media and information providers for self-expression, intercultural dialogue and democratic participation through various means in ethical, effective and efficient manner.
	3.4. Monitoring influence of information, media content, knowledge production and use as well as media and information providers	12. Monitor the impact of created and distributed information, media content and knowledge as well as use existing media and other information providers.

Table 6. Summary of MIL components, subject matters and competencies

A performance criterion is used to guide the concrete assessment of the competencies and development of competency-based standards. The performance criterion also specifies what is to be assessed and the required level of performance. In addition, it details the activities, skills, knowledge and understanding/attitudes that provide evidence of competent performance for each competency. There are a number of associated performance criteria for each competency.

There is a total of 113 performance criteria for all competencies proposed by the MIL Assessment Framework:

- MIL component One: 4 competencies, associated with 36 performance criteria,
- MIL component Two: 4 competencies and 42 associated performance criteria,
- MIL component Three: 4 competencies and 35 performance criteria.

The full MIL Competency Matrix, including the performance criteria that an individual should demonstrate in order to locate her/his level on each competency continuum is provided in Technical Annex E.

The MIL framework leads to the assessment of proficiency levels for grading the various MIL competencies:

Basic level a respondent has basic level of knowledge, training, or experience on MIL, but significant improvements are needed for effective application. *It enables the individual to:*	**Intermediate level** a respondent has a good level of knowledge and skills acquired from practice and training on MIL, but there are gaps in certain areas. *It enables the individual to :*	**Advanced level** a respondent has a very good level of knowledge and skills acquired from practice and training on MIL. *It enables the individual to:*
Recognize his or her information and media (content) need, identify and save information and media content from easily located and accessed information sources using basic tools.	Specify the nature, role and scope of his or her information and media (content) need, in order to locate and select from various and potentially conflicting information sources and providers of information and media content using various tools, storing it and applying key legal and ethical principles.	Formulate his or her information and media (content) needs into concrete strategies and plans to search for and access information from diverse sources using relevant and where necessary diverse tools in a systematic, explicit and efficient manner, and retrieve existing information for further utilization.
Select information sources without clear assessment criteria, and with limited application and awareness of major principles, conditions and functions of media and information providers in society as well as authentication of information and media content.	Analyze and differentiate quality of and evidence of relevant information sources and content, understanding the necessity of media and information providers and their implications for society, being unable to recognize different viewpoints; as well as store selected information and media content for further application.	Within the context and multiple conditions applicable, interpret, compare, critically evaluate, authenticate and hold synthesized information and media content, appreciating work of author(s), and media and information providers within the context of sustainable development of society, organization or community.
Organize and save retrieved information without substantive synthesis using basic tools and distribute without critical appraisal or ethical and legal considerations for limited application.	Create, produce and communicate new information and media content in new formats using appropriate channels and tools for well-defined application as well as engaging in a dialogue with others with limited awareness of ethical and legal implications.	Combine information and media content for creation and production of new knowledge considering socio-cultural aspects of the target audiences and then communicate and distribute in various appropriate formats and tools for multiple applications in a participatory, legal, ethical and efficient manner, as well as monitor influence and impact made.

Table 7. MIL framework of proficiency levels

Because MIL is a multiple-latent trait concept, the levels will need to be presented as a profile rather than as a single set of levels. These profiles can be constructed to identify areas of strength and weakness among a population, before appropriate policies are elaborated. It is important to note that an individual can perform higher on some dimensions but lower on others. For example, an individual can perform very well on activities related to the evaluation or understanding of the functions of media and information providers (MIL component 2), but not in the access and retrieval of media and information (MIL component 1), particularly if access is only possible through a computer or the Internet. On the other hand, individual performances on MIL component 3 activities may be correlated with those in the other two competencies. Figures 9, 10 and 11 show examples of profiles for each MIL component.

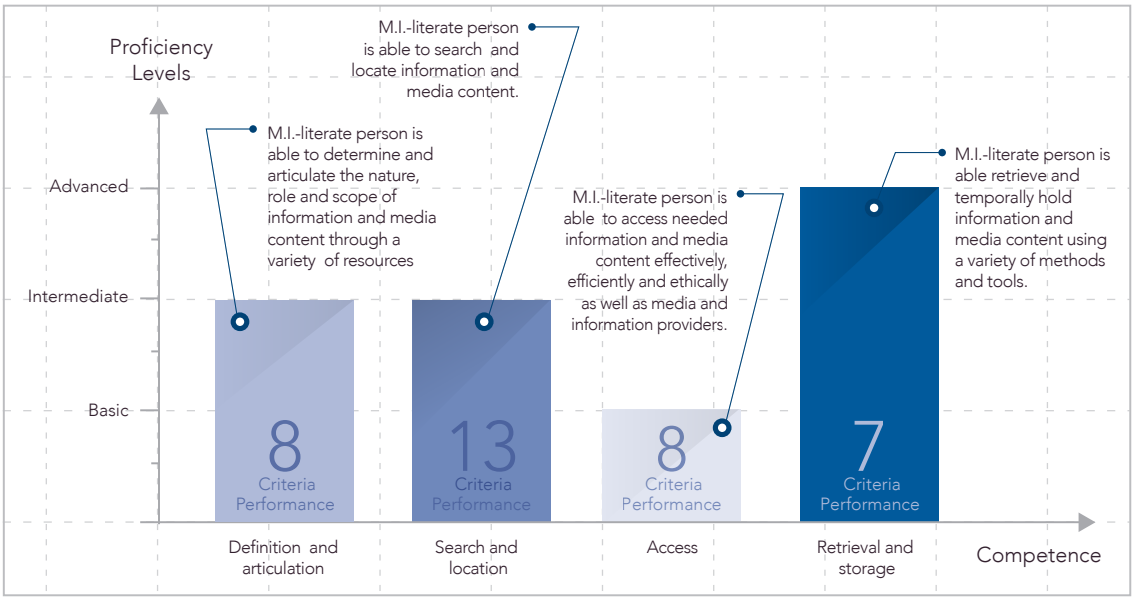

Figure 9. Profile example for the MIL component – Access

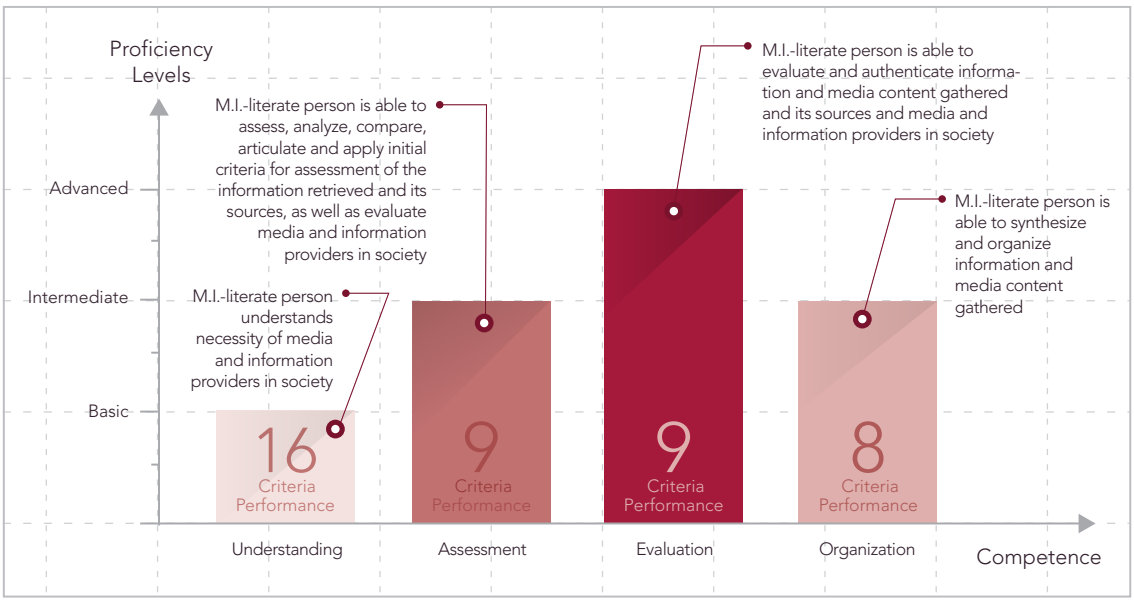

Figure 10. Profile example for the MIL component – Evaluation

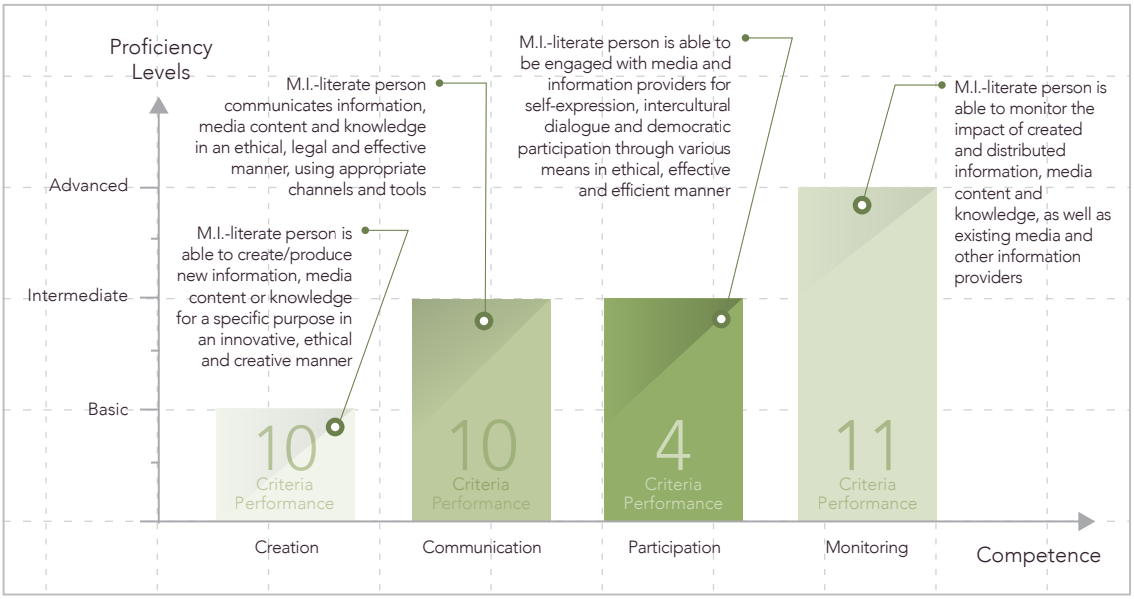

Figure 11. Profile example for the MIL component – Creation

Furthermore, levels of individual competencies are influenced by several contextual factors, both at the individual and the societal level. For example, ICT literacy levels of students and teachers in a given country may depend on the degree of pedagogical ICT integration in the classroom or in the teaching process, the quality and the implementation of national ICT policies in education, the access (at school, home and in other places as well as connection costs) to ICTs and teachers' and students' levels of ICT familiarity, including activities performed at school and other places by the students through ICTs.

In theory, MIL is a multidimensional latent trait, with each of the MIL components treated as an independent latent trait (Catts, 2010 UNESCO, 2011a). Multidimensional latent trait measurement can hence be applied. While independence among the latent traits is assumed in theory, data may reveal weak and negligible correlations among themselves.

2.4 Added value of integrated assessment of Tier 1 and Tier 2

The MIL Assessment Framework takes advantage of existing international, regional and national data sources to build a country background profile that highlights the measures of national initiatives that may contribute to the development of individual MIL competencies.

An enabling environment for MIL should be created at the national level in order to develop MIL competencies at the individual level. If favourable policies and conditions, infrastructure and other enabling factors are not in place, it is unlikely that individuals would be able to take their place in society and make a significant contribution to its development. For instance, MIL teachers would have resources – and most importantly, competencies – to equip students with critical 21st century MIL competencies and tools.

The Tier One set of indicators includes qualitative and quantitative indicators to gauge readiness at the policy and institutional levels for the promotion of MIL in society, education and work. This set includes a proposal for macro-statistical indicators to measure three of the elements of the media and information cycle: creation, distribution and reception of media and information. There is a range of existing indicators for Tier One.

The Tier 2 set of indicators looks at MIL competencies at individual and institutional level paying special attention to the measurement of competencies among teachers in service and in training who work at primary, secondary, and tertiary/university level. Selected teachers would be seen as representative of the formal education system, if the stratified random sampling method were applied.

It is important to note that the indicators that integrate media and information literacy in the digital age are required, as they provide a holistic overview of existing challenges and the interventions required at national levels. The UNESCO MIL Assessment Framework does not therefore test different types of literacy as separate traits, but rather identifies transversal competencies and a country's MIL enabling factors.

Chapter 3

Methodological Guidance to conducting MIL Assessment

Methodological guidance to conducting MIL Assessment

This chapter presents methodological guidance on adapting the MIL Assessment Framework for national implementation. It is made up of five sections:

The *first section* outlines the six steps involved in national adaptation, including the following critical questions that may need to be answered first:

- **Which institution would be best suited to lead the assessment of Teachers' MIL competencies?**
- **Which institution(s) would represent the national education system?**
- **Does a national steering committee (NSC) need to be set up to apply the MIL Assessment Framework in the country?**
  - If there is need for a NSC, what is its role?
  - How should the NSC be composed?
  - If there is need for a NSC, who should appoint its members?
- **Who should carry out the assessment (e.g. Ministry(-ies) in charge of education, a public examination unit, research, university sector, private entity etc.)?**
- **Should a national assessment team (NAT) be appointed?**
  - If so, who should appoint the national assessment team?
- **Are there good practices from other countries that could be incorporated and where can the appropriate human and financial resources be found?**

The *second section* provides information on statistical measurement models and the limitations on international comparisons between the results of the national analyses.

The *third section* looks at the development of a cost-effective delivery system, and provides suggestions for a browser-based computer testing system.

The *fourth section* includes technical guidelines for writing items and for the validation process, and makes concrete suggestions for the sampling frame.

The *fifth section* suggests ways to further elaborate and apply the MIL Assessment Framework results, with the aim of developing a range of scenarios for action.

The chapter will attempt to answer the following questions:
How does the Framework propose to assess MIL competencies?
and What does it propose to do with the assessment results?

3.1 Major steps towards national adaptation of the MIL Assessment Framework

The national adaptation of the UNESCO MIL Assessment can be divided into six steps (as shown in Figure 12).

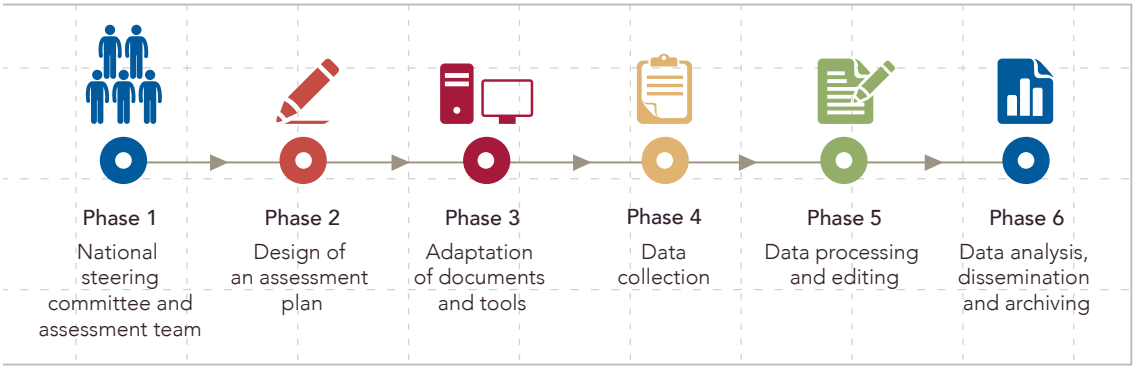

Figure 12. Proposed process for national adaptation

The descriptions of the steps proposed below for the national adaptation of the UNESCO MIL Assessment Framework are not prescriptive but indicative, and depend on each national context.

Phase 1: Designation of a National Steering Committee and a National Assessment Team

It is strongly advisable for the responsible ministry to nominate both a National Steering Committee (NSC) and National Assessment Team (NAT) (c.f. Greaney & Kellaghan, 2012) to:

- Oversee the design and implementation of the assessment (NAT);
- Ensure that the assessment has status and credibility in the eyes of government agencies, teacher education institutions, organizations that represent teachers, and other key stakeholders in the broader community (NSC and NAT);
- Help to identify key policy questions to be addressed in the assessment (NAT);
- Act as a channel of communication between key educational stakeholders (NAT);
- Help resolve administrative and financial problems that might arise during implementation of the assessment (NSC);
- Deal with possible negative reactions to the assessment from politicians (e.g. publication of the findings will give rise to political debate that reflects on their stewardship), or from teacher representatives, who may perceive the assessment as a new form of accountability (NSC).

A lead national institution in charge of education and teacher training mobilizes the national and international communities to nominate a National Steering Committee (NSC) representing key stakeholders. Depending on the country, key stakeholders are likely to be found among the following:

- Ministries responsible for information, communication, education, ICT and Internet, employment and culture;
- Universities, information and communication faculties or departments, national departments of statistics;
- Library associations;
- Information management institutions;
- Museums and archives;
- Educational institutions, including those training information and media professionals;
- Private sector representatives including those from IT, e-commerce, and the information and media sector;
- Information professionals and civil society.

Phase 2: Design of an assessment plan

The National Steering Committee or National Assessment Team, where they exist, should prepare a project document outline that includes the priority policy questions for the country that the MIL assessment should answer. Based on these questions, the national assessment team develops a working plan. The working plan should include a research framework and pay particular attention to gender sensitive data and indicators. Details on national assessments, as well as additional materials on measuring educational achievement are available, for example from the World Bank, that can be adapted by respective countries[25]. It is important to note that policy questions will help to prepare a research framework and later will guide the data analysis (see Phase 5, below).

An essential part of the process of adapting activities planned at the national level is first to consult all relevant partners and then jointly design a project document outlining the target group(s), human and financial resources, timing, and the required infrastructure.

If requested, and provided that resources are available, UNESCO will assist and train relevant partners on such issues as the nature of the MIL construct and writing valid items for a national adaptation of the assessment instruments. This training will develop the capacity of national institutions and individuals to understand the MIL construct and provide leadership in its implementation.

Administration and maintenance of the delivery model

The costs of a country's involvement will depend upon many factors that are specific to each country. The diversity of cultures and differences in economic development in various regions within a Member State will have a considerable impact on the resources needed. If a delivery mode has to be developed and documents need to be translated into several languages, then incremental costs have to be considered. It is up to each country to weigh the benefits of MIL – and its national assessment – against the costs of participation.

In order to encourage monitoring of MIL, administration and maintenance of the delivery mode should be kept as low as possible. It is essential to make sure that the MIL items pool is of a high quality.

Countries will need to choose MIL indicators at this level based on their policy priorities. At the high school and especially at primary school level, it is likely that in all but the smallest countries, a form of stratified random sampling would be necessary, possibly with differential population weights to ensure sufficient data for different regions or cultural groups. It is suggested that the design of such sampling plans should be made at the country level to ensure the information gained is of maximum use. To maximize benefits a country should train their team in charge of the administration, analysis and dissemination of data.

National Statistics Offices (NSOs) will provide an important resource for all technical issues, including questionnaire design, sampling strategy and national adaptation. Many questions that are included in national item pools may already have been tried and tested by NSOs in other national surveys, such as national surveys on the use of ICT in households.

Phase 3:
National adaptation of UNESCO documents and tools

For the national adaptation, UNESCO provides model questionnaires for the background survey (Tier One) and for the assessment of competencies (Tier Two).

The three sets of Tier One questionnaires collect data on:

- National contexts (see Technical Annex B),
- Teacher institutions (see Technical Annex C),
- Individual teachers (see Technical Annex D).

The MIL Competency Matrix is used in the assessment of MIL competencies as anticipated for Tier Two. UNESCO will provide an assessment instrument for the assessment of MIL competencies among teachers in service and in training.

The national adaptation of questionnaires is recommended since countries can be at very different stages of development. The publication provided with the questionnaires includes concrete technical guidelines for item writing. Particular attention should be given to specialized MIL-related terminology. Evidence shows that less-used national languages do not have MIL-related terminology which could be used for assessment purposes.

Phase 4: Data collection

National statistical organizations frequently conduct national household surveys and population censuses. Several parameters related to the survey logistics should be considered to ensure that the data collection is a success. These vary from country to country, particularly in developing countries and countries in transition (UN, 2005)[26].

It is important to choose the most appropriate delivery method for collecting the assessment data – in other words, the support (data collection instrument) that will be used to administer the survey, and the selection of items to be administered to the respondents. This issue needs to be solved before deciding the format in which items should be developed and presented to the respondents. The level of ICT penetration may favour one method over others, for example.

There are three possible delivery methods for the UNESCO MIL assessment (see below for more details):

- The Paper-Pencil Based Test (PP). This is a general assessment tool in which respondents need to read questions and respond in writing. This method can easily be adapted for administration where computers are not available and/or Internet connectivity is not used for testing, or where the target population is not familiar with ICTs. A limitation of this method, however, is that operators need to enter the responses into a database, thereby introducing the possibility of errors.
- The Computerized Fixed Test (CFT). This is the digital version of the paper-pencil based test. It has the advantage of facilitating data processing, compared to the paper version. In some instances it could be part of a mixed delivery method, on a CD-ROM or USB device, as well as using a paper-pencil based test.
- The Computer Adaptive Test (CAT). This is a method of administering tests that estimates and adapts the choice of items to the respondent's level of attainment, as evidenced by previous responses. It has become popular in many high-stakes educational and personnel testing programmes. A CAT model is very different to a paper-and-pencil test.

The nature of the competencies that are to be tested and the possibly limited financial resources mean that countries have to take a pragmatic approach. Table 7 compares the CFT and CAT:

Features of the delivery method	Computerized fixed test (CFT) *(including paper-and-pencil based test)*	Computerized adaptive test (CAT)
Item pool size	Typically small	Large
Test length	Fixed	Fixed or variable
Initial development	Modest effort	Substantial effort
Pre-test items	Easily handled	Easily handled
Cost to examinee	Modest	High relative to conventional tests

Table 8: Comparison between CFT and CAT across selected elements

Source: Parshall et al. (2002).

For the MIL Assessment Framework, the paper-and-pencil version is needed in case the competencies to be tested are not restricted by the minimum requirement or selection criteria to those target teachers able to use a computer. Although a respondent may be unable to use a computer this does not necessarily mean that she/he is media and information illiterate; they may be able to perform very well – and hence be competent – in other standards for determining MIL. A respondent may be able to evaluate information from broadcast channels (radio or TV), read a print newspaper and systematically assess the quality of the information.

Similarly, there are teachers who have had no formal training in media and information literacy, but have gained competencies on their own. In other words, some individuals may not have been trained to use a computer, to navigate the Internet and search for information – but they learn to do so because they need to, either occasionally or in their daily life. The benefits of computerized adaptive testing are given in the Technical Annex F.

Phase 5: Data processing and editing

Once data are collected, they are usually reviewed (either manually or automatically) to correct any mistakes and to check that the answers provided by a respondent are internally consistent. These corrected data are then entered into a processing programme, again either manually or automatically, to ensure that they are in the right format for analysis. In some cases, such as Computer Adaptive Testing or Computer Based Testing, there is no need for survey staff to enter the data again, once the respondent has entered his/her answers. Algorithms can be integrated, or programmes can be developed to perform data consistency controls automatically, hence saving time and minimizing data entry errors.

Phase 6: Data analysis, dissemination and archiving

From policy questions to analysis

The analytical framework established at the beginning of the process will determine the way data are analysed (c.f. Phase 2: Design of an assessment plan). In particular, national partners will structure their analysis around the various policy questions formulated at the outset by the key actors: the National Steering Committee (NSC) and National Assessment Team (NAT) (c.f. Phase 2: Design of an assessment plan). These policy questions will also dictate the type of background information that is needed to report on specific issues.

For the purpose of developing the background questionnaires (Annexes B, C and D), the following policy questions have been explored and proposed as an example:

- *Do conditions exist at national levels that favour the acquisition of MIL competencies among citizens, particularly teachers (men and women, in service and in training)? And what changes have been observed over the years?*
- *How important are MIL competencies for teachers (women and men, in service and in training?)*
- *Do individuals, in particular teachers, possess the required MIL competencies to prepare students for participation and engagement in knowledge societies?*

Gender-sensitive analysis

Gender-sensitive indicators and analysis are valued in national policies and for international community programming. Gender-specific reporting elements should be identified, and then highlighted in the assessment report. The results will help to develop more gender-specific actions and gender mainstreaming in MIL-related activities. Gender-related measurement could help to promote and increase gender equality at national levels and provide evidence-based information for concrete gender-specific measures, such as programmes and projects. Countries are therefore encouraged to ensure that the analysis incorporates the gender dimension, and other variables such as age, and location (e.g. urban versus rural).

Accessibility of assessment instruments

The national team also has to make sure that the assessment instruments are accessible by all potential respondents. These instruments should be designed in compliance with national or federal information accessibility laws and regulations.

National team	Design of an assessment plan	National adaptation of documents and tools for national adaptation	Data collection	Data processing and editing	Data analysis, dissemination and archiving
1.1 National steering committee 1.2. National assessment team (NAT) 1.3. Funding institution	2.1. Project document, including priority policy questions	3.1. MIL assessment instruments - model questionnaires (NAT): A. Background surveys (Tier 1): 1. National contextual data 2. Teacher institutions 3. Individual teachers B. Main assessment of teachers competency questionnaire (Tier 2)	4.1. Selection of delivery model: A. Paper-pencil based test (PP) B. Computerized fixed test (CFT) C. Computer adaptive test (CAT)	5.1. Manual for data entry, editing and scoring	6.1. Assessment report
1.2 National Assessment Team	2.2. Working plan	3.2. Design of administrative manuals and reporting tools	4.2. Sampling frame: A. Teacher institutions B. Teachers in training and service	5.2. Training of data processing staff	6.2. Scenarios for action
		3.3. Development of training materials for investigators	4.3 Instruction manual on data collection for: A. Investigators B. Supervisors		6.3. Item pool maintenance and update (PP, CFT, CAT)
			4.3 Training of investigators for data collection	5.2. Training of data processing staff	6.4. Archives
			4.4. Analytical guidelines for preparation of assessment report and policy brief		

Table 9. Summary of the national adaptation of the MIL Assessment Framework

3.2 Statistical measurement models

To make informed decisions, it is important to ensure the validity and reliability of the assessment instruments. MIL is not a single latent trait as is evident from the literature (Catts, 2005; Dunås, 2013; European Commission, 2009; UNESCO, 2013a). Some studies support the idea that a 'measure of a student's mastery of a particular skill can be obtained simply from sub-scores, (using) statistically advanced cognitive diagnostic models (to) provide a level of control in scaling, linking, and item banking unavailable with simpler methods' (Chang, 2012).There are item selection algorithms based on a multi-dimensional measurement model (Wang, Chang, & Boughton, 2010; Wang & Chang, 2011).

It is likely that there will be a high level of correlation between performance on the various sub-scales, and this can be used to reduce both the total number of items required for the item pool, and also the number of items that each respondent will be required to address. If data are required only for groups of respondents, then this will further reduce the number of items needed for reliable estimates to be made, because group means require far fewer items for reliable assessment than would be needed at the level of the individual. However, it is important to note that, whenever possible, the same question items (assuming they prove valid in testing) should be used across all the groups in a particular survey. If this is not the case, results may not be comparable across different populations or administrative areas.

The preferred approach to measurement is the *multiple latent traits model*. This measurement model places individual respondents on a continuum of MIL proficiency. The use of a latent trait measurement model accords with previous recommendations (Catts & Lau, 2008, p. 8). This will enable the MIL levels of individual respondents to be identified, without requiring them to attempt many items that are either too easy or are beyond their abilities. The alternatives to a latent trait measurement model are the classical theory test models[27].

A normative reporting approach would be of limited practical use, given that each community of respondents would need norms appropriate to their access to media sources, their level of education, and their learning needs. In practice, a criterion-referenced reporting approach requires a series of criterion levels ranging from basic concepts through to advanced use of MIL. Since the policy goal of Member States is to raise MIL levels, a fixed criterion reference point would apparently contradict the goal of continuous improvement in MIL competencies, and need to be modified and linked overtime.

The latent trait model can be applied using a computer-adaptive testing system across a range of platforms and thus accommodate Member States at different stages of digital technology development. This model can be delivered using a web-based platform, a networked computer system, or in less developed contexts, using a CD-based system that does not require reliable Internet access. For these reasons it is recommended that the multiple latent trait measurement model be adopted, with the number of separate constructs determined first to accord with the content validity implied by the Tier 2 MIL components, and with the number of independent latent traits subject to confirmation by statistical analysis.

The national adaptation of the MIL Assessment Framework will require some innovative elements in the measurement methodology to achieve the desired outcomes, but these are theoretically and technically feasible.

Limits to international comparisons using the analysis

Despite the quality of the design of the measurement instruments and the quality of the statistical analysis, international comparisons are not necessarily always valid, for a range of reasons, including cultural differences and the equivalence of the concepts, when translated into various languages or dialects of the same language. These issues may also apply at sub-national level in countries with great cultural diversity. UNESCO faces a considerable challenge in developing an international assessment framework because it is intended for use across a diverse range of Member States. It is therefore likely to be counter-productive to imply that precise comparisons can be made internationally if the necessary conditions cannot be guaranteed, such as equivalence in terms of the concepts used, measurement models, linguistic considerations and sampling design (Osborn, 2006).

3.3 Cost-effective assessment delivery system

Considerations for a cost-effective assessment delivery system

The MIL Assessment Framework suggests establishing an ICT platform to be used for assessment and data analysis. Knowing that many people in emerging economies have limited ICT access, alternatives to ICT delivery modes are proposed in order to include the assessment of MIL competencies of citizens, irrespective of the level and form of their ICT access. As mentioned above, the alternative delivery modes include the Paper-and-Pencil Test, Computer-based Testing (CBT) and mixed – computer based and paper-and-pencil. The most optimized method of delivery is Computer Adaptive Testing (CAT).

Model questionnaires for the background survey (Tier 1) are given in Annexes B, C and D. In the near future UNESCO will provide national partners with model paper-and-pencil questionnaires to assess teacher competencies (Tier 2).

For the scale-up of the assessment, Figure 13 shows how the selection of the delivery model influences the scope and scale of the MIL Assessment. The selected model will define:

- The need for resources for the development and maintenance of the system;
- The number of recipients/test-takers;
- The volume of data (from small to large) using other tools, such as mobile phones and tablets.

While the Paper-and-pencil (PP) model requires fewer resources at the beginning, it is likely to have significant limitations at later stages in terms of measurement of the performance of the recipients/testers, data volume and data analysis. In contrast, CAT requires more initial resources, particularly for the development and maintenance of a larger item pool, but in the long term it offers scope to collect other types of data, such as the time taken to complete a given task, as well as greater flexibility in the measurement of the recipient's/tester's performance. These will be useful for scaling up new activities (see Figure 13).

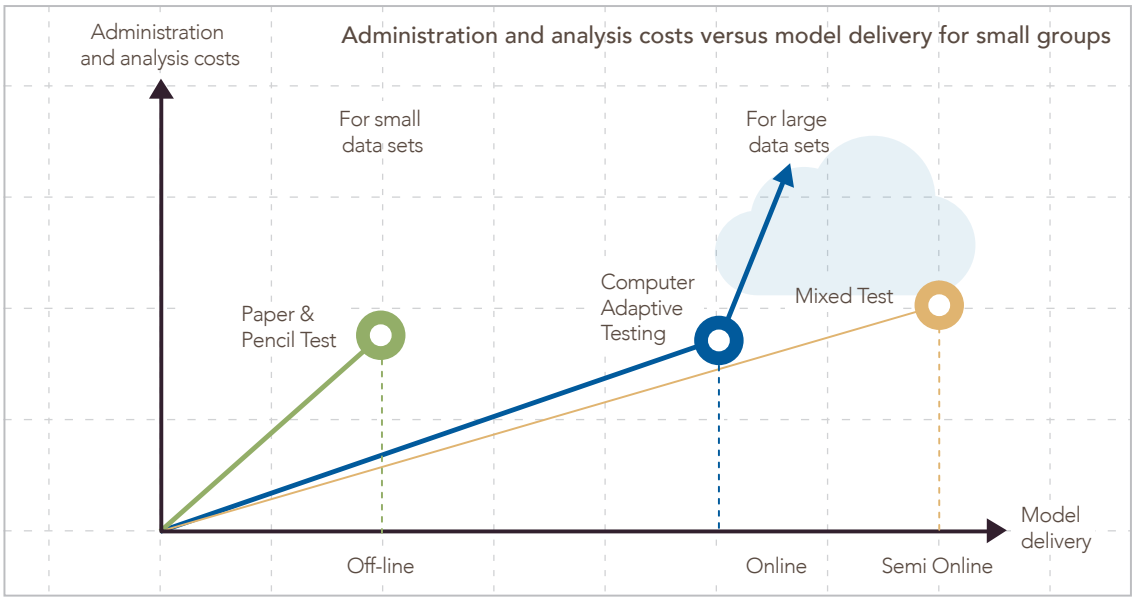

Figure 13. Selection of the delivery model and its implications for the scope, scale and costs of MIL Assessment: Cost of Design and Development

It is also important to note that the CAT model differs profoundly from a paper-and-pencil test. In traditional measurement models, all respondents are given an identical set of items. In contrast, with CAT, different respondents are given different sets of items according to each person's ability level, as determined by their responses to prior items. The major advantage of CAT is that it provides more efficient latent trait estimation with respondents required to complete far fewer items than in paper and pencil tests (Wainer, 1990; Weiss, 1982).

CAT also allows for cost-effective administration of assessments to smaller groups of examinees at frequent time intervals, because each person receives different computer-generated items (see Figure 14). This provides administrators and respondents with greater flexibility in test scheduling and hence a reduced administrative burden associated with mass testing regimes.

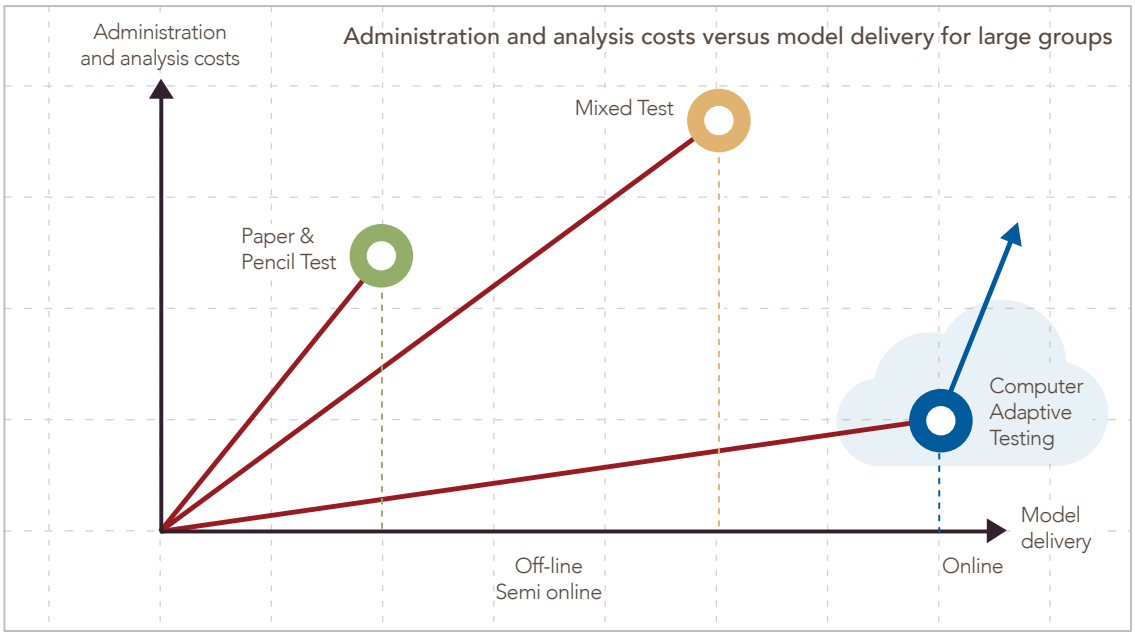

Figure 14. Selection of the delivery model and its implications for the scope, scale and costs of MIL Assessment: Design Costs versus Administrative Costs for Large Groups

The delivery methodology of Computer Adaptive Testing would enable discrimination of proficiency levels across each of the sub-components of the MIL Tier 2 competency. The Cognitive Diagnostic CAT (CD-CAT) can be used to classify mastery levels of respondents on each of the attributes in the Tier 2 indicator list (Chang, 2012). A computer-managed adaptive method of delivery can provide greater efficiency because it can select items based on prior responses by each individual. It can also record the way each respondent searches for, stores and retrieves information using ICTs (log files), thus making it possible to identify both what people know and what they do. This approach can therefore provide information for policy makers about the effectiveness of policies in terms of what people understand and how they perform MIL related tasks using ICTs. This will address one of the core issues in assessing competency, since it is possible to provide information about performance and underlying attitudes, knowledge and skills. Individuals need both to understand media and information and exercise MIL competencies so that they can adapt to the rapid changes in social and technical developments that impact on the societies.

With the CAT model, not all items need to be administered to a respondent before a reliable estimation of his or her ability is obtained. An algorithm facilitates the choice of items with respect to the performance of the respondent during testing. But for it to work properly, specific software needs to be available, while a significant pool of items needs to be developed, tested and calibrated. In addition, in order to ensure that complementary items of interest for specific new national policy issues are taken into account, the software will always need to be adapted from one country to another.

Finally, the method of delivery needs to be suitable for application across countries and between regions within a given country that may be at different stages of development in relation to the application of digital technologies. For example, while the Internet is available in the large cities of most developing countries, some rural areas may not even have a reliable electricity supply. The CAT system can be delivered using networks or can be delivered to stand alone computers using a CD-ROM. Where electricity is not available but smart phones are used with solar power, it is also technically feasible to deliver the MIL assessment using mobile phones. While MIL includes the ability to use radio, television, and print media, the capacity to search information on the Internet cannot be included unless the assessment is designed for use on a digital platform.

Considerations for browser-based MIL assessment

By taking advantage of advances in Web technology, UNESCO could develop a browser-based delivery application, (c.f. Mixed and CAT modes, in Figure 15) thus freeing Member States from the need to design and maintain their own delivery applications. This would provide a substantial saving in terms of the development and maintenance of the tool, and help to make the MIL assessment a cost-effective policy resource. Where Internet access is limited, a CD-ROM version of the system can be developed to include simulated search processes using content installed on the CD-ROM, producing results that can be assessed by the respondent, stored and retrieved, as would be the case with an on-line version.

Where Internet access is available, including on smart phones, the Web 2.0 environment also enables cross-platform application. This means that, where computer resources vary between regions within a country, policy makers can adapt the delivery model to accommodate the local infrastructure. The proposed UNESCO CAT system should run on Windows, Mac, and Linux platforms, turning almost any computer connected to the Internet into a delivery station for MIL indicators. As a result, countries and their regions will be able to make use of their existing computers and network equipment, with little additional cost. Moreover, since the only requirement for test delivery is an Internet connection – and Internet access points are rapidly multiplying – mobile testing is achievable with a browser/server CAT system. The CD-ROM based version (mixed, offline testing) is also feasible if a Member State chooses this option.

It is still likely that, in many developing countries, or countries in transition, in areas with little or no Internet access and a variable electricity supply, the paper-and-pencil test may well be necessary. Careful technical guidance will be required to ensure that the results from such tests can be aligned with a CAT design used in the capital city and districts with Internet. The system is illustrated in Figure 15.

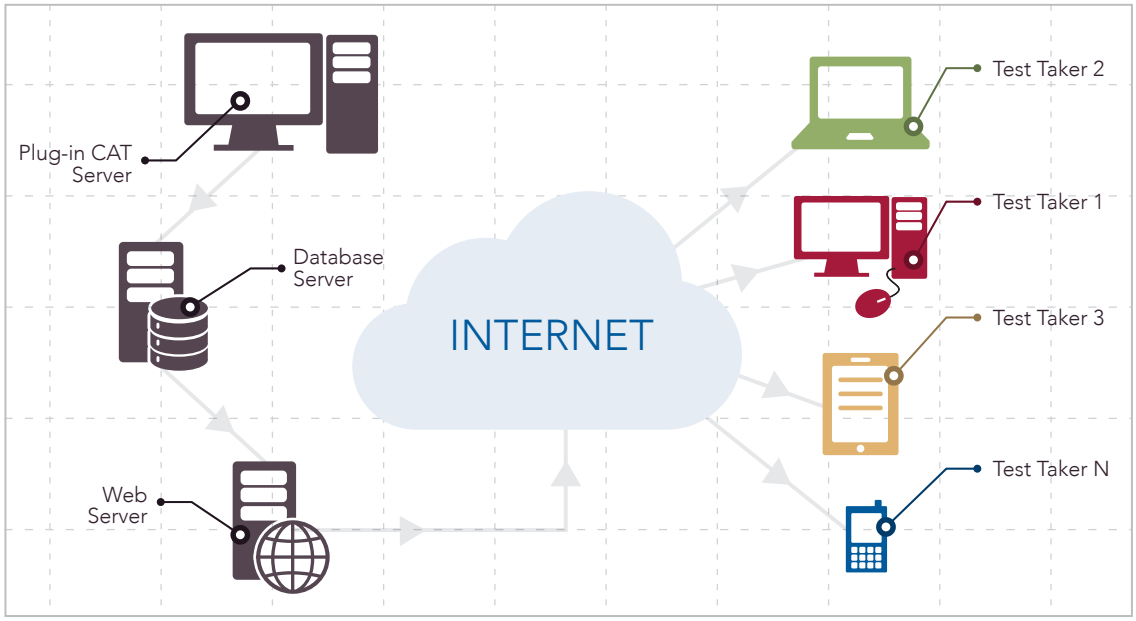

Figure 15. Linking a browser-based Computer Adaptive Testing system

3.4

3.4 Technical guidelines

For the collection of data at the national level using the MIL Assessment Framework, it is recommended that the major questionnaires for assessing MIL country readiness and teacher competencies are adapted to the local conditions and context. These technical guidelines have been tested with various groups in different countries, but it is important to point out that other resources for the national assessment exercise are available.

Two parts of the technical guidelines for the Tier Two – MIL competency assessment will be presented in this section and provide practical guidance for the national adaptation and application process:

1. Technical guidelines for the item development

- 1.1. Item writing
- 1.2. Critical incidence
- 1.3. Cross-validation
- 1.4. Content validation
- 1.5. Construct validity and reliability

2. Recommendations for the national adaptation and suggestions for the sampling frame

- 2.1. Socio-cultural adaptation
- 2.2. Linguistic adaptation
- 2.3. Item pool maintenance
- 2.4. Design of administration manuals and reporting tools
- 2.5. Suggestions for the sampling frame

1. Technical guidelines for the item development

The development of an item bank – and its revision – is proposed, with new items being developed if required. The item bank must be valid across diverse cultures, even within a single Member State. It must be suitable for rural and urban communities, for people of both genders, with different languages, abilities, and religious and cultural backgrounds. To ensure both content validity and acceptance of the indicators, the process of item development must be inclusive and employ robust methods to identify and eliminate cultural and gender biases.

For the adaptation process, two documents are provided, (a) the MIL Competency Matrix, and (b) the model questionnaire for the assessment of teacher competencies. The questionnaire for the assessment of MIL competencies using paper-and-pencil testing among teachers in service and training will be provided later. It is important to note that the competency elements presented in the MIL Matrix should not be seen as linear, but rather in a complex, pluralistic, situational and dynamic way.

Figure 16 provides information on measures taken by UNESCO to ensure the content validity of the competency framework during the development phase of a model questionnaire for the assessment of teacher competencies (Tier Two).

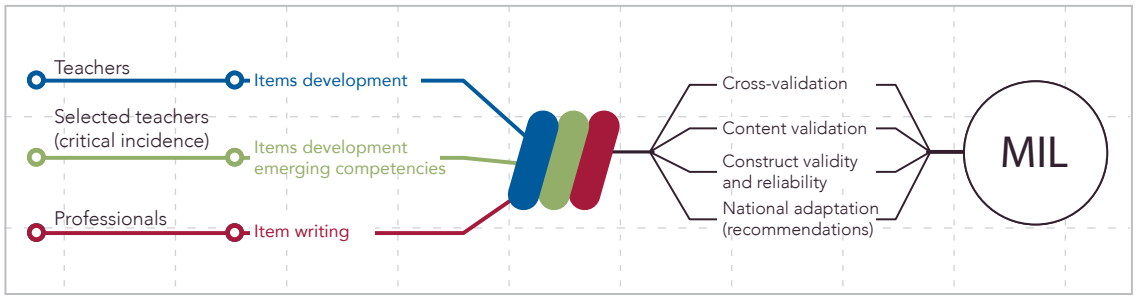

Figure 16. Content validation process

In order to ensure the overall quality of the MIL Assessment, quality assurance of constituent items is crucial. It is therefore important to gather information about good MIL practices from teachers in elementary schools, in secondary schools and at universities or colleges in order to develop items suitable for use in computer-based testing. The task of writing items suitable for large-scale testing of teachers therefore first involves carrying out interviews and observations with individuals or groups of people selected from these categories.

1.1. Item Writing

Countries will need to conduct item-writing workshops (offline or online) that target trained representatives of elementary, secondary and tertiary teachers. These activities would need to be supplemented by what are termed 'critical incidence interviews', which could be conducted using small focus groups drawn from the same trained participants. This method identifies infrequent but important MIL capacities. Examples of such infrequent events might be the identification of plagiarism or of fraudulent practices, but some of these incidents will not be obvious and, in any case, real events are needed to form the basis for assessment.

A preliminary training session for participants is needed to ensure consistent item construction so that they approach the task with a shared and common understanding of the MIL competencies. This includes a check on access to physical and digital resources on MIL using a background questionnaire (c.f. background questionnaire Tier 1 for individual teachers, see Technical Annexe D). Separate sessions should be conducted for educators at primary, secondary and tertiary levels.

Once items have been collected they will need to be edited by MIL and assessment professionals in order to ensure adequate coverage of each Tier 2 sub-component. If a Member State needs to address more than one language group, it is recommended to have all items edited in a common language by one or a few experts in item construction. They can also scan for obvious cultural and gender biases.

A systematic and comprehensive approach to item development is needed to generate the number and the diversity of behaviours required for a comprehensive set of MIL indicators. This is an essential development phase because, without direct evidence of MIL behaviours, the indicators will be of limited use.

1.2. Critical incidence - crucial or emerging capacities

The specification for inclusion of participants in the process of gathering examples is that respondents are competent in MIL and are drawn from the relevant teaching occupations. To ensure that competencies are identified, focus groups with MIL educator specialists are created to identify emerging skills. These focus groups involve what is called 'critical incidence' interviews, which focus on infrequent but either crucial or emerging capacities.

1.3. Cross-validation process

An efficient method for this cross-validation process should be organized, where some of the MIL specialists or teachers who contributed to the initial item writing tasks are invited to conduct content validation of the items and also to confirm whether items written by item writers are culturally sensitive. For this reason it is recommended that a two-phase content development and validation process be adopted (see Figure 17).

The first stage involves training representatives of the diversity of people in writing items that they judge to fit specific competency components. The second phase involves other trained participants writing the draft items and deciding which competency components are appropriate for the framework. The content is considered to be valid when there is agreement among the authors and the reviewers. *It is recommended that, prior to content development and validation, a small-scale training session should be organized for the item writers and validators on aspects of item development and validation.*

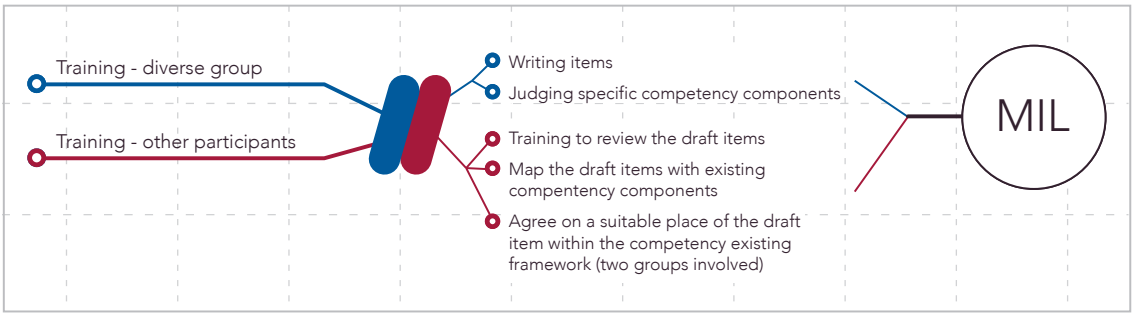

Figure 17. Two-phase content development and validation process for item development

1.4. Content Validation

Once item material is gathered it will need to be edited and translated into different local languages, if the country has more than one official national language, and then subjected to checks for content validity and cultural bias. This will require the proposed indicator items to be reviewed by peer reviewers to identify any elements that are specific to particular technical, cultural or social contexts.

The next phase in establishing content validity requires the validation of each edited draft item against the MIL competencies by trained respondents. It is proposed that all workshop resources be prepared for IT-based analysis, to save printing and to enable efficient data collection. It is advisable that the respondents are from the same groups used to write items. They should be able to provide feedback on items written by equivalent groups, once they have been moderated and edited by an expert in item construction. It should be seen as a separate process, which occurs some months after the initial item writing exercise.

The validation task is divided into two concurrent stages. First, each respondent is asked to scan each item for relevance, cultural bias or ambiguity. Relevance will be determined by the level of access of the respondent to the background survey (c.f. model questionnaire for assessment of MIL Teacher competency framework – Tier One and MIL Teacher Competency Matrix – Tier Two). This might also help differentiate the item pool for subsequent use, by identifying likely entry points for people with different levels of access to media and information resources. This initial scan will also help to detect any subtle cultural bias that may not be evident to experts in measurement theory, who may come from a different cultural perspective.

Respondents are asked to indicate the Tier Two MIL sub-component to which each item relates. Consistent agreement by trained respondents will demonstrate content validity and make the task of statistical analysis of construct validity far more efficient. This ensures that the indicators selected are of high quality and also have credibility across different cultures. This task will need to be undertaken by respondents at each target level, for instance, elementary, secondary and tertiary education.

1.5. Construct Validity and Reliability

The next development phase will involve the administration of pools of items to appropriate groups of respondents in sufficient numbers to enable statistical data to be collected that can then be used to confirm the construct validity of items. Based on previous test development experience, this process will probably identify about one third of the pool of items that produce coherent psychometric qualities. This refined pool of items will have demonstrated content and construct validity and the data will generate estimates of reliability.

The statistical process should involve matrix sampling, where individuals receive a set of items from the pool, including a core set of items, so that the characteristics of all items in each pool (e.g. primary, secondary and tertiary) can be cross-referenced, without each respondent being required to attempt an impossibly large set of items. The construct validity of thousands of items can be established using matrix sampling.

Items will also need to be tested for their discriminatory power. For example, if all respondents perform perfectly (100%) on a task, it is useless for discriminating between different levels of MIL. A careful balance of items will need to be used that distinguish different elements and levels of MIL competency.

2. Recommendations for the national adaptation and suggestions for the sampling frame

2.1. Recommendations for socio-cultural adaptation

The focus of the UNESCO Global MIL Assessment Framework is to assess a country's readiness and status of competencies required for all citizens, particularly teachers, to participate in knowledge societies. However, there may be specific cultural practices in various member states and regions within states, e.g. due to local customs. Indicators will identify the MIL elements that are common across diverse cultures. Should a Member State wish to explore the full extent of cultural nuances in MIL, quantitative indicators as proposed for the UNESCO Global MIL Assessment Framework would not be sufficient and additional qualitative methods will be required.

2.2. Recommendations for linguistic adaptation - a double translation process

If items have to be used in different languages then there also needs to be a double translation process to ensure the congruence of items across languages. A review of items written in one language by people in the alternate language group will help to avoid cultural bias. Inevitably translation back into the first language by different translators will lead to differences with the original version being identified. These need to be resolved by negotiation which includes an item writing expert so that the integrity of the items is assured both in terms of the structure of the questions and the shared meaning.

2.3. Item pool maintenance (CAT)

Once item pools are established, the country will need to monitor the use of its pool of items to ensure that it remains fit for purpose over time. This is necessary because technological, social and economic changes will impact on the way media and ICTs are utilized and the way information is processed and transmitted. There are also likely to be changes in social and cultural practices within countries and regions over time that will have an impact on the relevance of indicator items.

The construct validity of items can be reviewed at relatively low cost by replicating the statistical analyses on which it was originally determined, as part of a routine application of the MIL assessment. However, changes in MIL practices may mean that the content validity of items gradually erodes and needs to be reviewed, and, in time, new items to be developed. Time scales for these developments depend upon the rate of social and technological change, which cannot be predicted. Nonetheless, one might assume that a substantive review of construct validity might be undertaken by the country or UNESCO every five years, and that the content validity of items might be need to be renewed once a decade.

The largest cost in developing indicators is fixed, in the sense that it will be required irrespective of how many items are written. This includes the training required for item writers, establishing the CAT system, the development and implementation of capacity building programmes for policy makers and curriculum implementers, and the production of administration manuals on how to use the indicators. The cost of writing items that will be required for an item pool is a marginal additional expense, which is justified because a large item pool can be reused frequently with minimal maintenance.

To implement MIL Tier 2 indicators across most countries, performance tasks will be needed that are appropriate for primary, secondary and tertiary education. This means considering both the content and the levels of the curriculum to be chosen. Another possible differentiation can be made regarding technical and vocational education and training. Teacher education programmes can vary in terms of degree and length. The International Standard Classification of Education (ISCED) has provided a guide to the systematic classification of levels of education. The UNESCO Institute of Statistics maintains a mapping of national education systems to ISCED.

A sufficient number of items need to be developed to allow reuse of the pool of items in subsequent years. This will avoid the costly process of redeveloping and recalibrating items for each subsequent administration. There will need to be items and infrastructure to support different levels of access to digital communication, ICTs and the Internet, as measured using MIL Tier 1 indicators. The item pool for any Member State may need to be sufficiently diverse to enable items to be selected for regions with: (i) very little access to computers and to the Web; (ii) shared community facilities; and (iii) private access to Web sources. Various levels of ICT infrastructure will require different delivery systems to support CAT, such as the Internet and CD-ROM based systems. There may also be a need to address distinct ways of using digital systems to access media and information.

2.4. Design of administration manuals and reporting tools (mixed and CAT delivery models)

Suitable administration documentation and, where necessary, training in both administration and data analysis should be provided, as it is expected that each country will manage its own data collection, analysis and interpretation. This approach would require capacity building within countries and is necessary for local ownership of the outcomes. However, the present document does not provide details of the design of administration manuals and reporting tools.

2.5. Suggestions for the sampling frame

It is not necessary to undertake a census of all elementary and secondary teachers to obtain reliable estimates of MIL indicators, provided that a robust procedure is agreed upon for the systematic collection of data. The method used to select individuals for inclusion in a country survey will have significant implications for the procedure for implementing the MIL indicators, for interpreting the data and making inferences. The sampling frame used must be reproducible if the resulting country data are to be compared over time (within the country).

As the data are to be collected from individuals at specified levels of education, changes over time in MIL indicators cannot be measured for a particular cohort of individuals within a given level. Over time, these individuals will progress and either change level or exit from the education system. However, if the sampling frame procedures are reliable and consistent, comparisons over time for people at the same stage of educational practice and experience can be reported. This is what will be important when evaluating the progress of an education system in implementing policies that develop people's global MIL capacities.

A key consideration when determining the sampling frame and the size of the samples is the level of reporting on MIL. For instance, some countries may wish to monitor the attainment of MIL capacities among teachers in training. This will require either census data for each training institution, or samples from each institution, to obtain reliable indicators. For teachers in service, the interpretation of the data may focus on a district, region or even the whole country, requiring a stratified random sample of the respective populations of teachers. Sample size also depends on the extent to which information is sought from different categories of teachers. It is likely that most countries will want to identify MIL competencies by gender, age, and level of qualifications. It is also possible that separate estimates will be useful to policy makers for rural, regional and city-based teachers.

The level of accuracy of MIL estimates also needs to be established, by specifying the confidence interval for estimates. This is in part determined by the size of change in MIL attainment over time that is of interest to policy makers. Different countries can determine the confidence interval appropriate to their own policy needs. Other factors that will affect the sample size include the available budget, the statistical quality of the indicators and the number of MIL components on which an estimate is required. Once the smallest sample subset required for analysis is determined, an estimate of the number of people to include in the sampling frame can be identified. Advice on sampling frames for use by Member States can be included in documentation supporting the

MIL Assessment Framework. If international MIL Assessment reports are required, a minimum level of sampling methods may need to be specified. However, this is not likely to be an onerous requirement because most Member States will require more detailed analyses to inform policy choices between levels and regions within the country.

Additional work on sampling frames may be needed in large and federal countries, where cultural diversity and administrative decentralization may introduce significant differences between educational structures in different parts of the country. Such differences will have to be taken into account in all aspects of the survey design, from item specification to sampling. In the latter case it will be important to ensure that the sample is large enough to permit analyses of teachers in different education institutions in different parts of the country.

National educational surveys usually use stratified samples drawn in three stages. Figure 14 shows how a country might establish a sample of teachers in service.

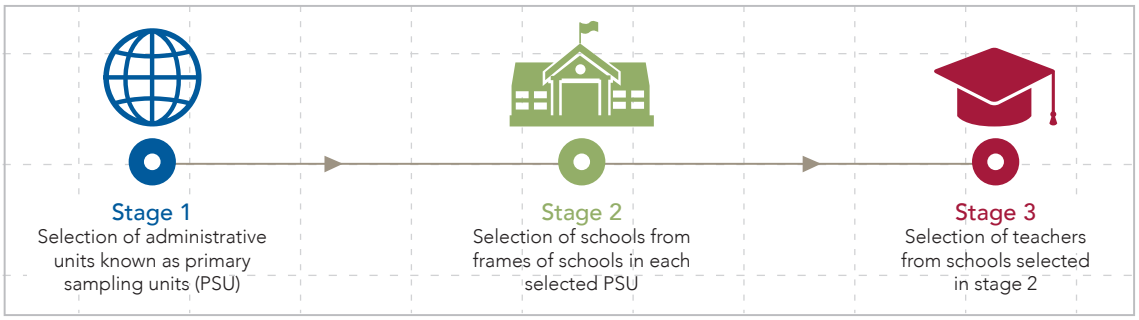

Figure 18. Three stages for a sample of teachers in service

The first stage is to select administrative units such as regions, provinces, territories, divisions or sub-divisions and districts known as primary sampling units (PSUs). The selection could be purposeful, in order to obtain descriptive statistics that will indicate how policies are impacting particular groups within society. Alternatively, the selection could be a stratified random sample, from which national predictive statistics could be generated. Primary sampling units are explicitly stratified by region and metropolitan status. The second stage of selection is the sampling of schools within the frame of a selected PSU that is stratified by location (city, suburban, rural) and school type (public or non-public). The third stage is sampling of teachers.

If stratified random sampling is used, the sample can provide estimates for the country as well as for certain subgroups (e.g. gender, language, or location).

3.5 Further applications of MIL Assessment Framework results

UNESCO's Member States are expected to use the Global MIL Assessment Framework to collect data on the enabling environment, and to monitor the extent to which citizens have acquired MIL competencies, particularly teachers in service and training. The information collected will help Member States to monitor the implementation and effectiveness of initiatives taken in the area of MIL and its introduction into education, information and communication, and ICT policies.

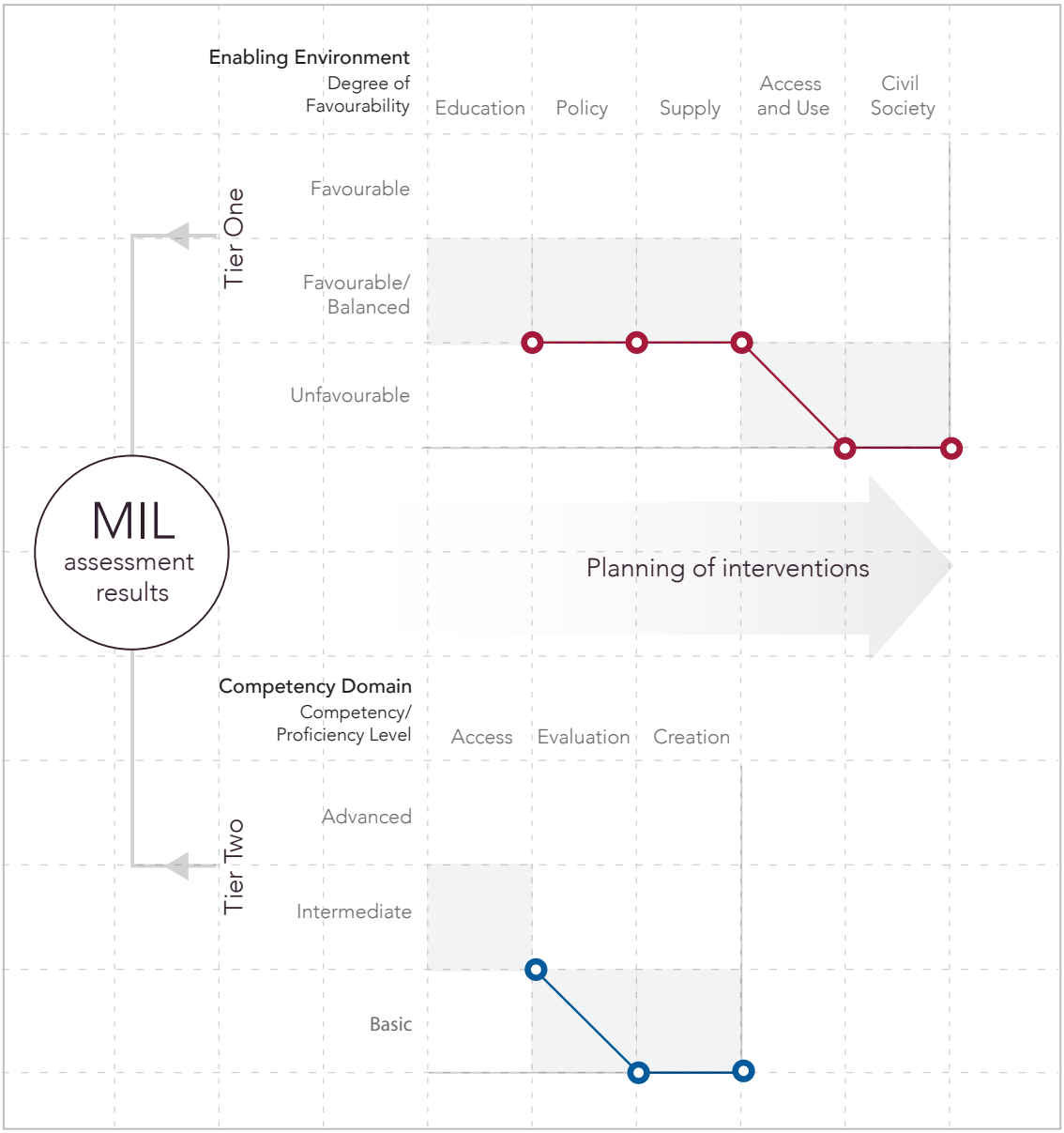

Figure 19. Proposed analysis of the assessment results and scenarios formulation

The collection and analysis of data provides country-specific evidence-based information about the level of country readiness for MIL and the competencies available. On the basis of analyses and the subsequent assessment report, countries are enabled to make informed decisions for interventions on the further development of MIL in general, on improvements in the environment and the enhancement of individual competencies. For example, Figure 19 takes different levels of country readiness and competencies into account and suggests how one evidence-based form of information could be analysed, while planning interventions that fit with country-specific contexts and conditions. The example illustrates that a given country may have a more or less favourable environment, but that the individual competencies of citizens, such as teachers in service and in training, are average or low in some cases (marked in grey). It is therefore important to pay more attention to the evaluation of competency elements and an enabling environment, such as access-use and civil society related issues.

Technical Annexes

Technical Annex A – Normative framework for MIL

Existing normative instruments and supporting documents related to MIL issues

Normative framework	
UNESCO Convention	Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005) Convention for the Safeguarding of Intangible Cultural Heritage (2003)
UNESCO Recommendation / Charter / Declaration	Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003) UNESCO Charter on the Preservation of Digital Heritage (2003) Universal Declaration on Cultural Diversity (2001) Revised Recommendation concerning Technical and Vocational Education (2001)
UN Declaration / Resolution	UN Resolution adopted by the General Assembly 56/116. United Nations Literacy Decade: education for all (2002) UN Resolution adopted by the General Assembly 55/2. United Nations Millennium Declaration (2000) The Universal Declaration of Human Rights (1948)
Other Recommendations	IFLA Media and Information Literacy Recommendations (2012)
Other Declarations	Doha Declaration on Supporting Media and Information Literacy Education in the Middle East (2013) Moscow Declaration on Media and Information Literacy (2012) Havana Declaration on Information Literacy (2012) Fez Declaration on Media and Information Literacy (2011) Brussels Declaration on Media Literacy (2011) Declaration of Lima (2009) Declaration on the Importance of Media Literacy by National Council of Teachers of English (USA) (2008) Toledo Declaration on Information Literacy (2006) Alexandria Proclamation (2005) Declaration of Russian Association for Film & Media Education (2004) Prague Declaration Towards an Information Literacy Society (2003)
UNESCO Intergovernmental Programmes	Intergovernmental Information for All Programme (IFAP) International Programme for the Development of Communication (IPDC)
International Commitments	Education for All (EFA) United Nations Millennium Development Goals (MDGs) United Nations Post 2015 Development Agenda World Summit on the Information Society Internet Governance Forum (IGF) Framework and Plan of Action for the Global Alliance for Partnerships on Media and Information Literacy (GAPMIL)

Technical Annex B – Questionnaire on national contextual data (Tier One)

Note: The national contextual data questionnaire is divided into five sections: media and information literacy education, media and information literacy policy, media and information supply, access and use, and civil society. It will be completed by the national institution that has the responsibility for the national adaptation and administration of the MIL assessment tools. Some data can be collected directly from international data sources, while others will necessitate collaboration among national stakeholders' institutions to make them available to the national assessment team.

The education levels used in this questionnaire are those established in the International Standard Classification of Education, ISCED 2011[29]*. However, data consistent with ISCED 97 can also be provided.*

If both classifications are used, an explanatory note should be provided to indicate data that are consistent with ISCED 2011 or ISCED 97.

Please tick the appropriate box below.

Data in this questionnaire are consistent with ISCED 2011 ☐

Data in this questionnaire are consistent with ISCED 97 ☐

Note: The following data can be collected directly from UIS databases (if data not available, the national assessment team should consider collecting them if feasible)

NC1: Country's education profile

	Primary school (ISCED 1)		Lower Secondary (ISCED 2)		Upper Secondary (ISCED 3)		Higher education (ISCED 5 & 6)	
	Male	Female	Male	Female	Male	Female	Male	Female
A1. Gross enrolment ratio								

	Primary school (ISCED 1)		Lower Secondary (ISCED 2)		Upper Secondary (ISCED 3)		Higher education (ISCED 5 & 6)	
	Male	Female	Male	Female	Male	Female	Male	Female
A2. Percentage of teachers								

	Pre-primary		Primary school (ISCED 1) Female	Lower Secondary (ISCED 2) Male	Upper Secondary (ISCED 3) Male
A3. Pupil-teacher ratio					

	Youth (15-24 years)		Adult (25-64 years)		Elderly (65+)	
	Male	Female	Male	Female	Male	Female
A4. Literacy rates						

A5. Global ICT in Education profile	Primary (ISCED 1)	Lower secondary (ISCED 2)	Upper secondary (ISCED 3)
Learner(s) to computer ratio in schools with computer-assisted instruction (CAI)			
Percentage of ICT-qualified teachers (basic computing skills (BCS)			
Percentage of teachers trained to teach subject(s) using ICT			
Percentage of teachers currently teaching subject(s) using ICT			
Percentage of educational institutions with access to the Internet			
Percentage of educational institutions with access to broadband Internet			
Percentage of educational institutions with electricity			
Percentage of educational institutions with a telephone communication facility			

NC2: Teacher policies

Note: The following data are collected directly from the Systems Approach for Better Education Results (SABER)[30] database of The World Bank (if data not available, the assessment national team should consider collecting them if feasible).

A: Teachers' working time

A1. Do teachers' official tasks include tasks related to instructional improvement?

Yes	No

A2. According to laws or regulations, who is responsible for determining public school teachers' statutory working time in primary and secondary school?

	ISCED 1 level		ISCED 2 and 3 levels	
	Yes	No	Yes	No
A national educational authority				
Sub-national educational authorities				
Local educational authorities				
Schools				
Don't know				

A3. What is the statutory definition of "working time" for public primary and secondary school teachers? Please tick one definition.

	ISCED 1 level		ISCED 2 and 3 levels	
	Yes	No	Yes	No
It is the number of hours spent at school				
It is the overall number of working hours				
There is no statutory definition of working time				
Don't know				

A4. Please provide below the statutory working time in hours, of public school teachers?

	ISCED 1 level	ISCED 2 and 3 levels
Hours per year		
Hours per week		
Not specified		

B. Teacher education

B1. Please tick below the entry level of education required to enter in teachers training for primary and secondary school teachers.

	ISCED 2	ISCED 3	ISCED 4	ISCED 5	ISCED 6
Primary school teachers					
Secondary school teachers					

B2. Please tick below the minimum level of education required to become primary or secondary school teachers.

	ISCED 2	ISCED 3	ISCED 4	ISCED 5	ISCED 6
Primary school teachers					
Secondary school teachers					

C: Shortage subjects

C1. Is there a policy that identifies critical shortage subjects?

Yes	No	Don't Know

C2. Are there incentives for public school teachers to teach critical shortage subjects?

Yes	No	Don't Know

C3. Which of the following incentives are in place to encourage public school teachers to teach critical shortage subjects?

	Yes	No	Don't Know
Better chances of promotion			
Higher basic salary			
Monetary bonus			
Scholarship or loan			
Housing support			
Travel benefits			
Food and beverage benefits			
Other (please specify)			

D: Professional development

D1. According to laws and regulations, who is responsible for providing funds for professional development of public school teachers?

	Yes	No	Don't Know
A national educational authority			
Sub-national educational authorities			
Local educational authorities			
Schools			
Teacher organizations			
Individual teachers			
Other (please specify)			

D2. In practice, who funds professional development of public school teachers?

	Yes	No	Don't Know
A national educational authority			
Sub-national educational authorities			
Local educational authorities			
Schools			
Teacher organizations			
Individual teachers			
Private corporations/ corporate foundations			
Civil society organizations/ non-governmental organizations			
Other (please specify)			

D3. Please provide below the amount of time that primary public school teachers should devote to professional development activities.

	Hours per year	Working days per year	Don't Know
Statutory requirement			
Official recommendations			

D4. Please provide below the amount of time that secondary public school teachers should devote to professional development activities.

	Hours per year	Working days per year	Don't Know
Statutory requirement			
Official recommendations			

NC3: Media and information literacy (MIL) education

Note: Data on basic computer skills are collected directly from UIS databases (if data not available, the assessment national team should consider collecting them if feasible).

A: MIL in the curriculum

A1. Please tick below the status of the following MIL-related courses in the primary and secondary school curriculum.

MIL-related courses on	Status								
	Present in the curriculum			Present and compulsory in the curriculum			Student assessment and reporting is compulsory		
	ISCED1	ISCED2	ISCED3	ISCED1	ISCED2	ISCED3	ISCED1	ISCED2	ISCED3
Basic computer skills									
Media and communication (Media education, Media literacy)									
Information and library (Information Literacy, digital literacy, etc.)									
Media and Information literacy									

A2. Does your country have a national policy, plan, law or regulatory mechanism to promote and/or implement the integration of ICT in Education? Please tick in the boxes.

	ISCED 1	ISCED 2	ISCED 3	ISCED 4
National policy				
National plan				
National law				
Regulatory mechanism				

A3. Does your country have a national training policy on the pedagogical integration of ICTs in teaching for:

	Yes	No
Teachers in service		
Teachers in training		

A4. In your country, are there teachers trained to specialise in teaching the following areas at secondary school levels? Please tick the right answer and when appropriate, provide the number of teachers with specialisation.

	Yes	No	Number of specialised teachers
Media and communication studies			
Information and library studies			
Media and information literacy studies			
Basic computer skills			

A5. In your country, are there specific programmes at secondary, post-secondary or tertiary levels which offer a specialisation in media and information literacy?

School level (ISCED 2011)	Media literacy		Information literacy		ICT literacy		Media and information literacy	
	Yes	No	Yes	No	Yes	No	Yes	No
ISCED 2								
ISCED 3								
ISCED 4								
ISCED 5								
ISCED 6								
ISCED 7								
ISCED 8								

A6. In your country, are there libraries (not including school or university libraries) that regularly provide specific training sessions on media and information literacy skills to support users (in %)?

	None	Once per year	Twice per year	Three times per year	Four times per year	More than four times per year
Public libraries (%)						
Private libraries (%)						
Community libraries (%)						

NC4: Media and information literacy policy

Note: Some of the following data can be collected directly from the UIS database (if data are not available, the national assessment team should consider collecting them if feasible).

A: Existence of a regulatory authority or a self-regulatory body for media

A1. Does your country have a regulatory authority for the following types of media? Please tick 'Yes' or 'No' in the columns below.

Type of media	Yes	No
Broadcast only		
Newspaper only		
Both broadcast and newspaper		
Online media only		
Both traditional (broadcast and newspaper) and online media		
Internet		
Other, please specify:		

A2. In your country, is there a self-regulatory body or professional association in the following industries?

	Yes	No
Broadcast		
Newspaper		
Internet		
Telecommunications		
Other, please specify		

A3. In your country, if there is a regulatory authority for broadcast, please tick which of the following responsibilities are part of its mandate:

List of responsibilities	Yes, exclusive mandate	Yes, but mandate shared with another entity	No, mandate lies with a different entity	No, no mandate in this country
License/authorization for broadcast channels				
Spectrum frequency management				
Monitoring of competition and concentration rules				
Monitoring time allocation for advertisements on broadcast media				
Monitoring legal provisions on content				
Assessment and/or resolution of citizens' complaints				
Monitoring a code of conduct for broadcast media				
Regulating advertising				
Proposing policies and regulations				
Ensuring fair and equal access to media during election periods				

A4. In your country, if there is a regulatory authority for newspapers, please tick which of the following responsibilities are part of its mandate:

List of responsibilities	Yes, exclusive mandate	Yes, but mandate shared with another entity	No, mandate lies with a different entity	No, no mandate in this country
Entitlement to operate				
Monitoring of competition and concentration rules				
Monitoring advertising for newspapers				
Monitoring legal provisions on content				
Assessment and/or resolution of citizens' complaints				
Monitoring a code of conduct for newspapers				
Proposing policies and regulations				

B: Specific legal provisions for media

B1. Does your country have a broadcast law?

Yes	No

B2. Does your country have a press law?

Yes	No

B3. Are there some legal guarantees in place to assure the confidentiality of journalists' sources?

Yes	No	If yes, please provide the related references of the laws (or links):

B4. Are there qualifications required by law/regulation for an individual to practice the following profession?

	Yes	No
Journalist		
Librarian		
Information specialist		
Communication specialist		

B5. Does your country have anti-concentration/anti-trust rules or laws on media ownership* for?

	Yes	No
Domestic private companies?		
Foreign companies?		
Please provide the related references of the laws (or links):		

**If the rules or laws apply to specific types of media only, please put a note in the metadata box below.*

B6. Does your country have regulations regarding cross-media ownership limitations for?

	Yes	No
Domestic private companies		
Foreign companies		
Please provide the related references of the laws (or links):		

B7. Is there a constitutional provision for access to information held by the State?

Yes	No	If yes, please provide the related references of the laws (or links):

B8. Is there a legal provision for access to information held by the State?

Yes	No	If yes, please provide the related references of the laws (or links):

B9. Is there a legal provision for the preservation of national archives?

Yes	No	If yes, please provide the related references of the laws (or links):

NC5: Media and information supply

Note: The following data can be collected directly from UNESCO Institute for Statistics (UIS) and the International Telecommunication Union (ITU) databases (if data are not available, the national assessment team should consider collecting them if feasible)

A: Global profile

A1. Please provide the following data on the supply of media and information in your country.

Indicator	Data
Number of public radio channels with national coverage	
Number of private radio channels with national coverage	
Number of community radio channels with national coverage	
Number of online only radio channels	
Number of public television channels with national coverage	
Number of private television channels with national coverage	
Number of community television channels with national coverage	
Number of online only television channels	
Number of print daily newspaper titles with national coverage	
Number of online daily newspaper titles	
Coverage of Internet services, as the percentage of population with potential access	
Coverage of mobile telephone services, as percentage of population with potential access	
Coverage of fixed telephone services, as percentage of population with potential access	
Number of national libraries	
Number of national museums	
Total number of indoor cinemas	
Indoor cinemas per capita (per million inhabitants)	

/ Indicators are substitutes*

B: Open Data

B1. Are there provisions for the application of creative commons licences in your country?

Yes	No

B2. In your country, are there specific policies and on-going activities related to the following open initiatives?

	Yes	No	Don't Know
Open Data (OD)			
Open Education Resources (OER)			
Open Solutions (OS)			
Free and Open Source Software (FOSS)			

B3. Please tick which of the following instances apply to your country.

	Yes	No	Don't Know
The country is a member of the Open Government Partnership (OGP)			
There is a Head of State website. If yes, please provide the web link			
There is a national open data portal* set by Government. If yes, please provide the web link			
There is a national open data portal set by Civil society. If yes, please provide the web link			

** Refers to a portal centralizing all information, where all public agencies disclose the information they are mandated to proactively disclose*

NC6: Media access and use

Note: The following indicators can be collected directly from UNESCO Institute for Statistics (UIS) and the International Telecommunication Union (ITU) databases (if data are not available, the national team should consider collecting them if feasible)

Indicator	Data
Fixed-telephone subscriptions per 100 inhabitants	
International Internet bandwidth Bit/s per Internet user	
Percentage of households with a radio receiver	
Percentage of households with television equipment	
Percentage of households with a fixed-telephone	
Percentage of individuals using a mobile cellular telephone *	
Percentage of households with a mobile cellular telephone**	
Percentage of households with electricity	
Percentage of individuals using a computer*	
Percentage of households with a computer**	
Percentage of individuals using the Internet *	
Percentage of households with Internet access**	
Fixed (wired)-broadband subscriptions per 100 inhabitants	
Active mobile broadband Subscriptions per 100 inhabitants	
Circulation of dailies per 1000 inhabitants	
Print newspaper readers per 1000 inhabitants	

/ Indicators are substitutes*

NC7: Civil society

Note: This category is intended to collect data on non-governmental organizations and community based organizations that are active in the field of media and information literacy. They provide training for the public at large on MIL issues, and may particularly provide specific training for teachers. Because obtaining data in this category can be a challenge to the national assessment team (EC, 2011), countries should evaluate the opportunity to collect such data. Without being exhaustive, the following data are of interest in this category.

A1. Please list below the names of the virtual communities that are locally accessible to users in your country, and specify if they are locally created or established.

Accessible to users in the country	Locally created or established	
	Yes	No
1		
2		
3		
4		
...		
...		
...		

A2. Please provide the official names of journals on media and information literacy that are accredited by official entities (Ministry, academic unit) of your country, and their frequency of publication.

Title of the journal	Frequency of publication				
	Once per year	Twice per year	Three times per year	Four times per year	Five or more times per year

A3. Please provide in the box below, the number of media and information literacy professionals' associations (including information professionals, librarians, archivists, ICT specialists, and museum professionals) there are in your country.

A4. In the box below, please provide the number of NGOs working in the field of media and information literacy in your country.

A5. Please provide the names of teachers' unions legally authorized in your country? Please also provide the number of members in each and their affiliation.

Name of the teachers' associations and unions	Total number of members	Affiliation (public, private, community)

A6. In your country, how many national events or conferences on MIL related issues were organized during the last two years?

Year	Official title of the event

A7. Is there a civil society coordination mechanism in your country? Please tick the right answer.

Yes	No	Don't Know

Technical Annex C – Questionnaire for teachers' training institutions/schools (Tier One)

Note: The questionnaire on teachers' institutions should be completed by the headmaster of each participating teachers' (training) institution.

The education levels used in this questionnaire are those established in the International Standard Classification of Education, ISCED 2011[31]. However, data consistent with ISCED 97 can also be provided.

If both classifications are used, an explanatory note should be provided to indicate data that are consistent with ISCED 2011 or ISCED 97.

Please tick the appropriate box below.

Data in this questionnaire are consistent with ISCED 2011 ☐

Data in this questionnaire are consistent with ISCED 97 ☐

A: Identification

A1. Please provide the following descriptive information for your institution:

Official name of the institution:	
Affiliation of the institution (public, private, community):	
Type of institution (teacher training institution, secondary school):	
Number of teachers:	Total:
	Male:
	Female:
Number of trainee teachers:	Total:
	Male:
	Female:

If a teachers' training institution (go to A2). If a secondary general or vocational school (go to A3)

A2. Please provide below the level(s) of training that are provided by your institution and related duration of the training in years. Please complete the appropriate cells on the number of students for the current year.

Level of teacher training	Minimum entry education level ISCED 2011	Duration of the training	Number of students		
			Male	Female	Total
Primary school teachers (ISCED 1)					
Secondary school teachers (ISCED 2 & 3)					
Vocational school teachers (ISCED 2 & 3)					

Go to B.

A3. Please provide below the level of education programmes available in your school, and the number of students for the current year.

Level of education programme(s) provided	Number of students		
	Male	Female	Total
Primary programme- ISCED 1			
Secondary general programme- ISCED 2			
Secondary general programme- ISCED 3			
Secondary vocational programme- ISCED 2			
Secondary vocational programme- ISCED 3			

B. Media and information facilities

B1. Are the following facilities available in your institution/school? Please specify the number of classrooms, laboratories for ICT, or school libraries that have these facilities as well as the total number of classrooms/ICT laboratories/school libraries.

Type of facility	Classroom		School laboratory for ICT		School library	
	With the facility	Total	With the facility	Total	With the facility	Total
Electricity connection						
Telephone connection						
Radio set for teaching or pedagogical purposes						
Television for teaching or pedagogical purposes						
Computer for teaching or pedagogical purposes						
LCD projector						
White or interactive board						

B2. If a library is available in your institution/school, please indicate whether or not the following facility or service is provided.

	Yes	No
Library facilities are readily available to users		
Annual regular budget is available for books and other facilities		
Access to online pedagogical resources is available		
DVDs or CDs with pedagogical content are available		
The library has subscriptions to print (including both print and online) daily newspapers		
The library has subscriptions to online only newspapers		
The library provides free internet access to users		
If yes, are users required to register?		
The library provides access to online educational resources (catalogue, journals, etc.)?		

B3. How many book volumes are available to users?

B4. How many electronic titles are available to users?

B5. How many days is the library open per week?

B6. How many hours is the library open per day?

C. Media and Information Literacy policy

C1. Is there a training policy on the pedagogical integration of ICTs in teaching in your school? Please check the right answer.

Yes	No

C2. Please tick which of the following teaching practices apply to your school

Teaching practice	Yes	No
Radio-assisted instruction		
Television-assisted instruction		
Computer-assisted instruction		
Internet-assisted (web-based) instruction		
Interactive-board-assisted teaching		
Distance education		
Use of e-books or interactive tablet computers		
Use of mobile phones		
Use of blogs and interactive discussion forums		

C3. If one of the options above is chosen, are personnel available? Please check the right answer.

- For the maintenance of the equipment?

Yes	No

- To provide technical assistance to teachers during their classes?

Yes	No

C4. If No to C3, whom should a teacher contact when technical assistance is needed during the classes? Please check the right answer(s).

manage by oneself	a colleague	a student	other, please specify:

C5. Is the following training on the use of ICT facilities offered to teachers and financed by your institution/school?

Training	Status of the training			
	Offered		Participation financed	
	Yes	No (go to the next)	Yes	No
Radio-assisted instruction				
Television-assisted instructions				
Computer-assisted instructions				
Internet-assisted (web-based) instruction				
Interactive board				
Distance learning				
Distance teaching or learning				
Use of e-books or interactive tablets				

Technical Annex D – Questionnaire for teachers (Tier One)

Note: The questionnaire on teachers' institutions should be completed by the headmaster of each participating teacher's (training) institution.

The education levels used in this questionnaire are those established in the International Standard Classification of Education, ISCED 2011[32]. However, data consistent with ISCED 97 can also be provided.

If both classifications are used, an explanatory note should be provided to indicate data that are consistent with ISCED 2011 or ISCED 97.

Please tick the appropriate box below.

Data in this questionnaire are consistent with ISCED 2011 ☐

Data in this questionnaire are consistent with ISCED 97 ☐

A: Identification

A1. Please provide the following descriptive information for your institution:

Name of the institution/school:
Name of the respondent:
Sex of the respondent (Male, Female):
Year of birth:
Zone of residence (city, rural):
High school degree granted:
Higher level of education attended:
Domain/subject of specialisation:
Employment status as teacher (in service/ in training):
Years of employment experience prior to becoming a teacher? Specify the sector of employment:

B. Professional experience

B1. Please tick below your current employment status as a teacher.

Full time (go to B3)	Part-time teacher	Please provide percentage part time (in hours per week):

B2. If part-time, do you have another occupation?

Please specify:

B3. Please provide the number of years you have worked as a teacher, per ISCED level covered.

	ISCED 2	ISCED 3	ISCED 4	ISCED 5	ISCED 6-8
Number of years					

B4. Please provide the titles of the courses and the related subjects you have taught during the last five years at each ISCED level. In the boxes under each ISCED level you taught, please write Yes if you did and No if you did not. Please do not leave any cell blank.

Title of the course	Subject	ISCED level				
		ISCED 2	ISCED 3	ISCED 4	ISCED 5	ISCED 6-8

B5. In the boxes under each ISCED level you taught in table B4, please provide the average number of students per course. Please put the symbol "n/a" (not applicable) for the ISCED level that does not apply in your case.

Title of the course	Subject	Average number of students per ISCED level				
		ISCED 2	ISCED 3	ISCED 4	ISCED 5	ISCED 6-8

C. Media and Information Literacy policy

C1. If the following facilities are available in your zone of residence, please provide the frequency in terms of average number of hours per month you use them.

Facility	Yes	No	Frequency of usage (hours/ month)
Movie theatre			
Internet café			
Other public Internet Access Point			

C2. How often per week do you use a local library service (including public, community and school libraries) and for what reason?

Library service	Every day	5 to 6 times	3 to 4 times	1 to 2 times	Not a user
Borrow material (books, laptop, DVDs, CDs, etc.)					
For Internet access only					
For reading facilities only					
A combination of the above					

C3. Please tick which of the following equipment is available for your usage at home, and provide the average number of hours you use them per day.

Equipment	Availability for usage		Frequency of usage (hours/day
	Yes	No	
Electricity			
Mobile phone			
A smart phone			
Radio set			
Television equipment			
Computer/Laptop			
Internet connection			
Tablets, e-readers			

C4. Please provide information on the type of media and the number of each type you regularly use to gather news and other general information.

Media type		Number of media outlets regularly used	Number of media outlets available in your zone of residence
Radio channel	Public		
	Private		
	Community		
Television channel	Public		
	Private		
	Community		
Print newspaper	Public		
	Private		
	Community		
Online news sites	Public		
	Private		
	Community		
Social media (Facebook, Twitter, etc.)			
Blogs (please provide the number of blogs)			
Internet in general (please provide the average number of websites consulted)			

D. Familiarity with media and information facilities

D1. Have you ever followed formal training in using computers? Please check the right answer.

Yes (go to D4)	No (go to D2)

D2. Have you ever used a computer? Please check the right answer.

Yes	No (go to question D7)

D3. If Yes, how did you learn? Please check the right answer(s)

Myself	Assistance of a peer

Go to question D5

D4. Where were you trained? Please indicate all that apply.

	Yes	No
During academic studies/ school		
On the job as part of institutional training		
My own private initiative		

D5. Do you use e-mail either for private or for professional purposes?

Yes	No

D6. On a scale, from 0 (no skills) to 4 (expert), please choose the level of confidence you have in performing the following tasks with a computer?

Task	Rating				
	0	1	2	3	4
Open a file from a specific folder					
Create a folder					
Save a file in a specific folder					
Create a text file					
Enter text in a text file					
Create a file in a spreadsheet software (e.g. Excel)					
Perform basic operations with a spreadsheet software (e.g. add columns, simple arithmetic and mathematical functions)					
Create graphics with a spreadsheet or similar software					
Prepare a presentation					
Search information on the Internet/ use a web browser					
Download material from specific websites to prepare lessons					
Uploading/sharing files					
Join in on-line debates on current events					
Use on-line health services					
Use e-government services					
Perform online transaction					

D7. Please tick below the equipment that is available to you at school, and specify if you use it for teaching.

Equipment	Availability at school		Used for teaching	
	Yes	No	Yes	No
Radio set				
Television equipment				
Computer/laptop				
Internet				
Printer				
USB (memory stick)				
CDs or DVDs				
DVD reader				
Video projector				
Mobile devices (e.g. tablet computers, smart phones)				

Technical Annex E - MIL Competency Matrix (Tier Two)

Competency element 1: Recognizes the demand for, is able to search for, accesses and retrieves information and media content

MIL mention	Competency	Performance criteria
Definition and articulation of a need for information	M.I.-literate person is able to determine and articulate the nature, role and scope of the information and media (content) through a variety of resources	1. Recognizes the need for information and media content
		2. Defines the need for information and media content
		3. Recognizes the need and importance of media and information providers
		4. Determines and specifies information needs linking with key and relevant concepts, disciplines and subjects in order to transform a need into a form for an action
		5. Knows that different types of information needs / problems require different sources of information (other people, groups, organizations or objects) and/or places from which something comes, arises, was created or obtained (such as library, archive, media, Internet)
		6. Assumes that different types of information needs / problems may not be solved without others' help, such as people, groups or organizations
		7. Connects and consults with other individuals, groups, organizations, or levels to formulate a general statement / question
		8. Formulates a general statement / question based on information need into a form of an active statement / question, vocalizes, writes down, types, constructs, expresses using any technique in an explicit and efficient manner
Search and location of information and media content	M.I.-literate person is able to search and locate information and media content	9. Develops search strategy (-ies) to find appropriate information, media content, information providers, means and tools
		10. Knows roles and functions of information producers and media institutions in society where information and media content could be found and located
		11. Explores, determines and situates the place / site where information and media content could be located by any instrument/tool and place, such as any physical and/or virtual place
		12. Seeks to identify an author, producer, organizer, disseminator of information and media content
		13. Understands the role of metadata
		14. Identifies, differentiates and prioritizes potential information sources by type of information source, date, topic, author, sender, receiver, keywords, tags and terms, etc.
		15. Appreciates diversity of information and media content provided by information providers and media, as well as appreciates diverse formats

MIL mention	Competency	Performance criteria
		16. Distinguishes formats of information and media resources
		17. Decides what types of information and media resources are required
		18. Knows importance and relevance of tools for locating information and media content
		19. Recognizes limitations, challenges and possibilities of locating information and media content due to technical, legal, economic, social-cultural, political and other reasons
		20. Refines search strategy, if required
		21. Locates those information sources, using appropriate tools
Access to information, media content and media and information providers	M.I.-literate person is able to access needed information and media content effectively, efficiently and ethically, as well as media and information providers	22. Determines the method(s) and strategy(-ies) for accessing information and media content
		23. Determines the availability, costs, time, benefits and applicability of acquiring the needed information and media content, applying the method(s) and strategy(-ies) formulated above
		24. Follows basic laws, regulations, policies, rights and principles related to ethical access to: information, documentary heritage, media content, ICTs, other media and information providers
		25. Acknowledges the importance of the rules, laws and regulations related to access to information
		26. Knows that access to information and media content could be restricted
		27. Uses diverse tools to access information and media content
		28. Accesses selected information and media content through a variety of media and other information providers
		29. Accesses media and other information providers, including those on the Internet, for self- expression, creativity, social and political participation
Retrieval and holding / storage/ retention of information and media content	M.I.-literate person is able to retrieve and temporally hold information and media content using a variety of methods and tools.	30. Uses various systems and tools to retrieve most suitable information and media content in a variety of formats
		31. Uses other forms of inquiry in order to retrieve information
		32. Retrieves different types of information
		33. Selects, organizes and holds onto the retrieved information and media content using appropriate technologies and tools
		34. Knows requirements, rules and practices of holding information and media content
		35. Assumes that retrieved information and media content could be useful in future
		36. Applies basic requirements of holding information and media content

Competency element 2:
Understands, assesses and evaluates information and media

MIL matter	Competency	Performance criteria
Understanding of information and media	M.I.-literate person understands necessity of media and information providers in society	1. Understands principles and conditions necessary for media and information providers to fulfil their functions
		2. Understands role and functions of media and information providers in society to inform, teach, influence and entertain
		3. Recognizes that media and information providers have implications for society
		4. Knows that the work of media and information providers and their impact can and should be monitored
		5. Knows concepts of ethics and rights related to media and information and international and professional standards
		6. Recognizes the impact of information and media content on oneself
		7. Identifies how information and media content can be represented differently and in different formats
		8. Identifies and differentiates who owns and creates information and media content
		9. Understands authorship and rights of authors
		10. Appreciates the importance of acknowledging others' work in terms of authorship and rights
		11. Knows about editorial independence and censorship of information and media content, as well as media and information institutions
		12. Recognizes that audiences/users interpret information and media content in different ways
		13. Knows that there are various viewpoints in any information and media content
		14. Appreciates information and media content applying aesthetic criteria and formats
		15. Understands the codes and genres of different media and information platforms
		16. Understands the importance of advertisement in media and information providers

MIL matter	Competency	Performance criteria
Assessment of information and media content, and media and information providers	M.I.-literate person is able to assess, analyse, compare, articulate and apply initial criteria for assessment of the information retrieved and its sources, as well as evaluate media and information providers in society	17. Defines assessment criteria for information and media content retrieved and information sources: purpose, audience, authorship, credibility, significance, supplier, relevance, currency, reliability, completeness, accuracy, timelines, scope, and coverage.
		18. Creates or uses basic assessment instrument(s) / tool(s) for evaluation of information and media content, as well as media and other information providers
		19. Selects and summarizes main elements such as ideas, keywords, concepts, messages and themes from retrieved information and media content
		20. Understands the purpose and importance / significance of information and media content and its context on sustainable development
		21. Interprets, makes connections on the retrieved information and media content, and restates in own words
		22. Distinguishes editorial independence and recognizes censorship of information and media content and media content, and media and other information providers
		23. Describes the intended audiences of the retrieved information and media content
		24. Identifies, analyses and differentiates diverse advertising messages, processes, techniques, standards, and codes of practice
		25. Identifies and verifies additional information sources, methods and search strategies using diverse tools

MIL matter	Competency	Performance criteria
Evaluation of information and media content, and media and information providers	M.I.-literate person is able to evaluate and authenticate information and media content gathered and its sources and media and information providers in society	26. Defines evaluation criteria and appropriate tools
		27. Aware about limitations and subjectivity of evaluation
		28. Identifies and unionizes related needs / topics / issues and asks additional questions
		29. Examines information and media content gathered, and its sources as well as media and information providers
		30. Evaluates information and media content gathered, its sources as well as media and information providers
		31. Compares information from different media and information sources
		32. Understands the importance of life cycle of information and media content for evaluation
		33. Draws conclusions from information and media content gathered using various technique and makes a judgement
		34. Provides arguments for the drawn conclusions
Organization of information and media content	M.I.-literate person is able to synthesize and organize information and media content gathered	35. Takes and records own notes and summarizes
		36. Revises, refines, frames and narrows his/her initial need / problem / issue / question
		37. Groups and organizes information and media content
		38. Understands the importance of indexing selected information and media content through indexation
		39. Uses tools and format for organization of information and media content
		40. Stores relevant information and media content based on evaluation for future use
		41. Translates information and media content and from one format to another
		42. Synthesizes information and media content from several formats such as print, audio, video

Competency element 3:
Creates, utilizes, and monitors information and media content

MIL matter	Competency	Performance criteria
Creation of knowledge and creative expression	M.I.-literate person is able to create/produce new information, media content or knowledge for a specific purpose in an innovative, ethical and creative manner	1. Recognizes that existing information and media content could be combined with original thought, experimentation, and/or analysis to produce new information and knowledge
		2. Organizes the information gathered and media content in a manner that supports the purposes and format of new information, media content or knowledge as well as solves the problem
		3. Considers the importance of socio-cultural aspects of the target audience, such as gender, race, age, ability etc.
		4. Internalizes, integrates, formulates and presents information and media content gathered using tools and formats into a new context – prior knowledge
		5. Reflects and, if needed, revises the creation process
		6. Applies international standards, requirements, recommendations for new knowledge creation in an ethical manner
		7. Is aware of the importance of information accessibility standards and recommendations for reaching out to a specific target audience
		8. Customizes information and media content, applying information accessibility standards and recommendations
		9. Uses various tools for the creation and aesthetic presentation of new knowledge in various formats
		10. Realizes that new knowledge may have various far-reaching purposes and consequences

MIL matter	Competency	Performance criteria
Communication of information, media content and knowledge in an ethical and effective manner through the media and ICTs	M.I.-literate person communicates information, media content and knowledge in an ethical, legal and effective manner, using appropriate channels and tools	11. Knows that new knowledge should be shared, distributed and communicated
		12. Chooses a communication medium, format and license that best supports the communication, distribution and sharing of information, media content and knowledge, taking into account the size and type of audience
		13. Uses a range of information and communication technologies and applications for the purpose of communicating, distributing and sharing information, media content and knowledge
		14. Identifies, copies, communicates, distributes, shares information, media content and knowledge in contextually-relevant settings to the target audience
		15. Communicates information and media content in an ethical way
		16. Communicates information and media content in a legal way
		17. Knows how to protect own work, personal data, civil liberties, privacy and intellectual rights
		18. Aware of the consequences and risks of communicating, distributing and sharing knowledge in virtual worlds
		19. Understands the interdependencies between users and victims/ perpetrator/ bystanders / witnesses of ICTs and media platforms
		20. Shares information, media content and knowledge through a range of media and tools
Participating in societal-public activities as active citizen	M.I.-literate person is able to be engaged with media and information providers for self-expression, intercultural dialogue and democratic participation through various means in ethical, effective and efficient manner	21. Recognizes the importance of being engaged and involved in societal-public activities, through various media and information providers
		22. Aware of the consequences and risks of participating in societal-public activities, including in virtual worlds
		23. Shares and interacts with other creators, producers, users, information providers and targeted audience, physically or virtually, and via a range of tools
		24. Engages and participates in societal-public activities through various means and tools

MIL matter	Competency	Performance criteria
Monitoring influence of information, media content, knowledge production and use, as well as media and other information providers	MIL- person is able to monitor the impact of created and distributed information, media content and knowledge, as well as existing media and other information providers	25. Knows about the need/importance of monitoring shared information, media content and knowledge
		26. Uses or establishes monitoring means/ mechanisms and policies/instruments for periodical assessment of the effectiveness of intended impacts
		27. Monitors and makes judgements on shared information, media content and knowledge, such as quality, impact, and integrity of practices
		28. Identifies and analyses how target audience responded to information, media content and knowledge and its impact
		29. Knows and uses available information and media monitoring services and tools
		30. Knows how results of monitoring could be used for improvement or creation of new information, media content and knowledge
		31. Knows how to monitor media ownership and its implications
		32. Understands the functions and role of institutions providing public relations services and how these influence the audience and decision making;
		33. Monitors the functions of public relations services and lobbyists
		34. If required, redirects and recasts information and media content, based on the comparison of actual results with intended results
		35. Knows how and where to communicate appreciation or complaints

Technical Annex F – Computerized Adaptive Testing

Computerized Adaptive Testing (CAT)

Computerized Adaptive Testing (CAT) is a method of administering tests that estimates and adapts the choice of items to the respondent's level of attainment as evidenced by previous responses, and it has become popular in many educational and personnel testing programmes. A CAT model differs profoundly from a paper-and-pencil test. In traditional measurement models, all respondents are given an identical set of items. In contrast, with CAT different respondents are given different sets of items according to each person's ability level as determined by their responses to prior items. The major advantage of CAT is that it provides more efficient latent trait estimation with respondents required to complete far fewer items than are required in paper and pencil tests (Wainer, 1990; Weiss, 1982). Furthermore, CAT allows the cost effective administration of assessments to smaller groups of examinees at frequent time intervals, because each person receives different computer generated items. This provides administrators and respondents with greater flexibility in test scheduling and hence a reduced administrative burden associated with mass testing regimes.

Computerized Adaptive testing (CAT) requires a larger pool of valid items to enable a robust adaptive process. It is likely to have higher marginal cost than CFT* to develop than computer of paper-pencil based tests but may prove economically beneficial in the medium term, and more reliable. Repeated data collection allows monitoring the impact of policy and practice over time. Reusing valid calibrated items means that monitoring can occur without the cost of producing a new item pool.

From a technical perspective creating an item pool is always a big challenge, but it can be easily handled if items are generated from observation and interviews and used for the establishment of a large pool of items.

The delivery methodology of Computerized Adaptive Testing (CAT) would enable discrimination of proficiency levels across each of the sub-components of the MIL Tier 2 competency. The Cognitive Diagnostic CAT (CD-CAT) can be used to classify mastery levels of respondents on each of the attributes in the Tier 2 indicator list. A computer managed adaptive method of delivery can provide great efficiency because it can select items based on prior responses by each individual, and it can also record the way each respondent searches for, stores and retrieves information using ICTs, thus enabling both what people know and what they do to be identified. This approach can therefore provide information for policy makers about the effectiveness of policies in terms of both what people understand and how they perform MIL using ICTs. This will address one of the core issues in assessing competency, because it is possible to provide information about performance and underlying attitudes, knowledge and skills. Individuals require both understanding about MIL and the performance of MIL so that they can adapt to the rapid changes in social and technical developments that impact on the knowledge society.

Finally the method of delivery needs to be suitable for application across countries and between regions within countries that are at different stages of development in relation to the application of digital technologies. The CAT system can be delivered using networks or can be delivered to stand alone computers using a CD. Where electricity is not available but smart phones are used with solar power it is also technically feasible to deliver the MIL assessment using mobile phones. While MIL includes using radio and print platforms, the capacity to search the Internet for information cannot be included unless the test is designed for use on a digital platform.

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Glossary

	A
Advertising	A set of practices and techniques that draw consumer/audience attention to products or services with the purpose of persuading them to purchase the product or service advertised.
Application	A computer programme (see also 'programme').
Archetype	A model or ideal form of a person or object that is held to represent subsequent versions of that person or object.
Assessment for learning	A new name for formative assessment (see below).
Attitude	The degree of actual power present in an individual or system to perform a given physical or mental act. Ability types are: cognitive ability, creative ability, intelligence, language ability, psychomotor skills and reading ability. A learned tendency to evaluate things or react to some ideas, persons or situations in certain ways, either consciously or unconsciously, that has an influence on behaviour. (UNESCO IBE Glossary of Curriculum Technology).
Audience	The group of consumers for whom a media text was constructed as well as anyone else who is exposed to the text.
Auditory learning	Learning through listening – sometimes grouped with visual learning and kinaesthetic learning (see below) as one of three different types of learning.
	B
Blocking	Refers to a technical way of obstructing access to digital content by preventing access to the address of a piece of information - Uniform Resource Locator or URL (see World Wide Web below).
Blog	A website, usually maintained by one person, where he or she posts commentary, descriptions of events, pictures or videos. Other users can leave comments on blog entries but only the owner can edit the actual blog. Blogs are often referred to as 'online journals'.
	C
Capacity-building	Increasing people's abilities, usually their ability to carry out their work, by improving their knowledge and skills.

Citizenship (active)	The state of being a member of a defined community (political, national or social). Citizenship is usually understood to comprise a set of rights (e.g. voting and access to welfare) and responsibilities (e.g. participation). Active citizenship is the philosophy that citizens should work towards the betterment of their community through economic participation, public and volunteer work, and other such efforts to improve life for all citizens.
Citizen journalism	Refers to the ability of people, using digital media, to interact with and reshape news and content by providing their own information, comment or perspective.
Civic responsibility	Citizenship status, under social contract theory, carries with it both rights and responsibilities.
Code of ethics/code of practice/diversity code	The set of principles of conduct for journalists that describe the appropriate behaviour to meet the highest professional standards. Examples of such codes were established by the International Federation of Journalists (IFJ). Most share common principles, including truthfulness, accuracy, objectivity, impartiality, fairness and public accountability, as these apply to the acquisition of newsworthy information and its subsequent dissemination to the public.
Communication	A process whereby information is packaged, channelled and imparted by a sender to a receiver via a medium. All forms of communication require a sender, a message and an intended recipient. However, the receiver need not be present or aware of the sender's intent to communicate at the time of communication in order for the act of communication to occur.
Competency	The ability of an individual to mobilize and use internal resources such as knowledge, skills and attitude, as well as external resources such as databases, colleagues, peers, libraries, instruments etc., in order to solve a specific problem efficiently in a real life situation. The set of skills, knowledge and understanding/attitudes needed to do something successfully to a professional standard.
Competency level	A person's ability to fulfil a specific role or function. A specific grading scheme is used to recognize competency that can be understood and adopted across the individuals.
Computer Adaptive Testing (CAT)	A method of administering tests that estimates and adapts the choice of items to the respondent's level of attainment, as determined by previous responses. A CAT model is very different to a paper-and-pencil test, as it can select items based on prior responses by each individual, and can also record the way each respondent searches for, stores and retrieves information.
Composite indicator	Several individual indicators compiled into a single index on the basis of an underlying model of the multi-dimensional concept that is being measured.
Computerized Fixed Test (CFT)	The digital version of a paper test, which facilitates data processing and reduces the likelihood of human error when compiling a database of results.
Construct validity	Construct validity refers to the validity of inferences that observations or measurement tools actually represent or measure the construct being investigated. Constructs are abstractions that are deliberately created by researchers in order to conceptualize the latent variable, which is the cause of scores on a given measure (although it is not directly observable). Construct validity is essential to the perceived overall validity of the test.
Content validity	It (also known as logical validity) refers to the extent to which a measure represents all facets of a given social construct.

Context	A set of facts and circumstances that surround a media text and help determine its interpretation.
Contextual analysis	The pedagogical approach in MIL teaching that focuses on the study and analysis of the technical, narrative and situational contexts of media texts.
Convention	In the media context: a standard or norm that acts as a rule governing behaviour.
Convergence	The ability to transform different kinds of information, whether voice, sound, image or text, into digital code, which is then accessible by a range of devices, from the personal computer to the mobile phone, thus creating a digital communication environment.
Copyright	A set of rights granted to the author or creator of a work, to restrict others' ability to copy, redistribute and reshape the content. Rights are frequently owned by the companies who sponsor the work rather than the creators themselves, and can be bought and sold on the market.
Course	A programme of study.
Core indicator	An essential, non-modifiable, irremovable indicator of the MIL Assessment Framework.
Critical thinking	The ability to examine and analyse information and ideas in order to understand and assess their values and assumptions, rather than simply taking propositions at face value (c.f. also reflective thinking).
Culture	A shared, learned and symbolic system of values, beliefs and attitudes that shapes and influences perception and behaviour.
Curriculum	A list of the topics to be learned in a course of study. (The terms 'curriculum' and 'syllabus' are used slightly differently in different countries, but essentially they both mean a list of what is to be learned). A set of courses the content of which is designed to provide a sequential approach to learning.
	D
Democracy	A system of government where the people have final authority, which they exercise directly or indirectly through their elected agents, chosen in a free electoral system. It also implies freedom to exercise choice over decisions affecting the life of the individual and the protection of fundamental rights and freedoms.
Digital citizenship	Having the ICT equipment and skills to participate in a digital society, for example to access government information online, to use social networking sites, and to use a mobile phone.
Digital literacy	The ability to use digital technology, communication tools or networks to locate, evaluate, use and create information. It also refers to the ability to understand and use information in multiple formats from a wide range of sources when presented via computers, or to a person's ability to perform tasks effectively in a digital environment.
Discourse	The treatment of a subject or issue (spoken or written) discussed at length.
Diversity	Genuine respect for and appreciation of difference – central to the idea of pluralism. Democratic societies or systems protect and value diversity as part of human rights and respect for human dignity.

E	
Editor	The person responsible for the editorial side of a publication, determining the final content of a text, especially of a newspaper or magazine. This term should be clearly differentiated from media owner, which refers to the person or group of stakeholders who own a media company.
Editorial independence	The professional freedom entrusted to editors to make editorial decisions without interference from the owner of the media outlet or any other state or non-state actors.
Equality	The idea that everyone, irrespective of age, gender, religion and ethnicity, is entitled to the same rights. It is a fundamental principle of the Universal Declaration of Human Rights captured in the words 'recognition of the inherent dignity and the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world'. The idea of citizenship embraces equality issues.
F	
Film	A form of entertainment that enacts a story by a sequence of images and sound, giving the illusion of continuous movement.
Freedom of Expression	A fundamental human right. It is used to indicate not only the freedom of verbal speech but any act of seeking, receiving and imparting information, regardless of the medium used. The freedom of the press is a corollary to this right and essential to the building and supporting of communities and civil society.
Freedom of information	The right of citizens to access information held by public bodies.
Freedom of speech	The freedom to speak freely without censorship or limitation.
Freedom of the press	The media in general (not just print media) being free from direct censorship or control by government. This does not preclude the application of competition law to prevent monopolies, or state allocation of broadcast frequencies.
G	
Gatekeeper	A generic term applied to anyone who has the role of filtering ideas and information for publication or broadcasting – the internal decision-making process of relaying or withholding information from the media to the masses. Gatekeeping occurs at all levels of the media hierarchy – from a reporter deciding which sources to include in a story to editors deciding which stories to print.
Genre	A specific kind of media content (e.g. entertainment, information, news, advertising, drama, etc.). Each genre has its own general purpose and design.
Global village	First mentioned by Marshall McLuhan in his book The Gutenberg Galaxy, to describe how the globe has been contracted into a village by electronic technology and the instantaneous movement of information from every quarter to every point at the same time. It has come to be identified with the Internet and the World Wide Web.
Good governance	Good governance is epitomized by predictable, open and enlightened policy-making, a bureaucracy imbued with professional ethos acting to further the public good, the rule of law, transparent processes, and a strong civil society participating in public affairs.

Governance	Best understood as a process of governing that involves interaction between the formal institutions and those in civil society. Governance is concerned with who wields power, authority and influence, how these are used, and how policies and decisions concerning social and public life are made. Governance embraces both the institutions of government and the practices and behaviour that inhabit them. Governance may be qualified as good or poor.
	H
Hate speech	Any communication that incites hatred of a defined group of people because of their collective characteristics (ethnicity, gender, sexuality, etc.).
Human rights	A set of entitlements and protections regarded as necessary to protect the dignity and self-worth of a human being. Such rights are usually captured in national and international documentation that articulates these rights (e.g. Universal Declaration of Human Rights, the European Convention on Human Rights and the Convention on the Rights of the Child, etc.). Also, the rights of groups or peoples, such as poor and/or marginalized groups in society.
	I
Ideology	A doctrine, philosophy, body of beliefs or principles belonging to an individual or group. It can be thought of as a comprehensive vision, a way of looking at things (as in common sense and several philosophical tendencies), or as a set of ideas proposed by the dominant class of a society to all members of this society.
Information and communication technologies (ICT)	All technical means used to handle information and facilitate communication, including computer and network hardware, as well as necessary software. ICT includes telephony, broadcast media, and all types of audio and video processing and transmission. It stresses the role of communications (telephone lines and wireless signals) in modern information technology.
Image	An iconic mental representation or picture.
Indigenous or community media	Any form of media that is created and controlled by a community – either a geographic community or a community of identity or interest. Community media are separate from either private (commercial) media, state-run media or public broadcast media. These media are increasingly recognized as a crucial element in a vibrant and democratic media system.
Information	A broad term that can cover data; knowledge derived from study, experience, or instruction; signals or symbols. In the media world, the term 'information' is often used to describe knowledge of specific events or situations that has been gathered or received by communication, intelligence or news reports.
Information sources	The persons, groups and documents from which information is obtained.
Information literacy	The ability to recognize when information is needed and to locate, evaluate, effectively use and communicate information in its various formats. Information literacy includes the competencies to be effective in all stages of the lifecycle of documents of all kinds; the capacity to understand the ethical implications of these documents; and the ability to behave in an ethical way throughout the stages.

Internet	A global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide. It is a network of millions of private, public, academic, business and government networks, of local to global scope, that are linked by a broad array of electronic and optical networking technologies. See also World Wide Web.
Indicator	A data element that represents statistical data for a specified time, place, and other characteristics – observation from a performance.
	J
Journalism	The collecting, writing, editing and presentation of news in newspapers, magazines, radio and television broadcasts or the Internet.
Kinaesthetic learning	An approach to learning that involves physical activity rather than, for example, listening to a lecture.
Knowledge	The fact or condition of having information or of being learned. Information that is presented within a particular context, yielding insight on application in that context, by members of a community. In a broad sense, theory (concepts, principles, models, etc.) that can be learned through schools and academic institutions, books, encyclopaedias, the Internet or any other learning support.
Knowledge worker	A person who develops, produces, applies and lives from his/her knowledge whose main capital is knowledge.
Knowledge societies	A society that nurtures its diversity, and that takes advantage of its many knowledge forms, from indigenous local wisdom to high-level techno-scientific knowledge. This concept emphasizes that knowledge is not only produced in a scientific laboratory but is also represented in the accumulated experience of humankind in all nations. To plan for the participation of future generations in the digital knowledge society, it is advocated that people in all societies, including text-based and oral societies, should have an opportunity to receive MIL training.
Latent trait measurement model	The premise that skills cannot be observed directly (unlike height and length); we can only measure them from the responses given to specific test items.
Learner-centred	An approach to education that places the learner at the heart of the learning process. Here the needs and aspirations of individuals are placed at the centre of any learning process or programme, focusing particularly on the experiences they bring to the learning situation. It embraces the notion of participation, and values the learner's contribution to the community of learning.
Library skills	Competency in the use of a library.
Learning society	A society that embraces the idea that everyone should keep learning throughout life.
Lifelong learning	Connected to the idea of learner-centred education. It recognizes that learning does not 'start' and 'stop' after a programme of instruction within a specific time and space. Each individual is constantly learning, which makes media and information technologies critical to sustain this kind of learning. It occurs in various settings (places of work, in community activities, non-formal education settings, etc.).

M	
Mainstream media	Media disseminated via the largest distribution channels, which are therefore representative of what the majority of media consumers are likely to encounter. The term also denotes media that generally reflect the prevailing currents of thought, influence or activity.
Marketing	The process by which companies create customer interest in goods or services. Marketing generates the strategy that underlies sales techniques, business communication and business developments.
Mass media	Channels of communication through which messages flow and which are designed to be consumed by large audiences using the agencies of technology.
Media	Physical objects used to communicate, including mass media (radio, television, computers, film, etc.). Media are a source of credible information in which contents are provided through an editorial process determined by journalistic values and where editorial accountability can be attributed to an organization or a legal person. In more recent years the term 'media' is often used to include new online media.
Media content	It is information that was produced and published by media and delivered via any medium such as the Internet, television, radio, ICTs as well as live events to the end-user/audience in specific contexts.
Media and Information Literacy (MIL)	The essential competencies (knowledge, skills and attitudes) that allow citizens to engage effectively with media and other information providers and develop critical thinking and life-long learning skills for socializing and becoming active citizens. M.I.-literate person, is used as a shorter version of Media and Information literate person.
MIL Country Readiness	The level of a country's capacities to take up MIL initiatives at the national level, as determined by international measurement tools and standards.
MIL Country Readiness Model	A method proposed by the MIL Global Assessment Framework to assess country readiness for the planning and implementation of MIL-related initiatives. It includes five categories of initiative that are important for creating an enabling environment on MIL and three levels of country readiness.
MIL competencies	A set of competencies that empower citizens to access, retrieve, evaluate, understand, use and create information and media content in all formats and sources, using ICTs in a critical, ethical and effective way. The MIL competencies are composed of knowledge, skills and attitudes. Although often synonymous with 'skills', in this document and for the MIL Assessment Framework, UNESCO uses the term, competencies, which is also more relevant when applied to a complex environment, including cognitive, metacognitive and non-cognitive factors.
MIL Country Readiness Profile	A set of qualitative and quantitative indicators to gauge the preparedness of a given country for MIL. Five categories of initiative have been identified as being important for creating an enabling MIL environment at the national level: Media and information education; Media and information literacy policy; Media and information supply; Media and information access and use; and civil society.
MIL Analysis Model	A structure that describes major MIL Assessment parameters related to the literacy, competencies and enabling environment.

Media languages	Conventions, formats, symbols and narrative structures that indicate the meaning of media messages to an audience. Symbolically, the language of electronic media works in much the same way as grammar works in print media.
Media literacy	Understanding and using mass media in either an assertive or non-assertive way, including an informed and critical understanding of media, the techniques they employ and their effects. Also the ability to read, analyse, evaluate and produce communication in a variety of media forms (e.g. television, print, radio, computers etc.).
Merchandising	Activities aimed at the quick retail sale of goods using bundling, display techniques, free samples, on-the-spot demonstration, pricing, special offers, and other point-of-sale methods.
Message	The information sent from a source to a receiver.
Mixed delivery methodology	Paper-and-pencil test with or without some semi-automatized features and access to the Internet. It could be delivered on CD-ROM or Memory stick (USB) formats. The results are not sent to the central server.
Multiple latent trait measurement model	Model used to measure multiple skills. For example, to answer an item correctly, the student not only needs to know addition, but also subtraction.
Multimedia	The combined use of several media, especially for the purposes of education or entertainment. It can also mean the integration of text, sound, full– or partial–motion video or graphics in digital form.
Multi-stakeholderism	A principle applied in international cooperation inviting different stakeholders to express their positions on a specific subject. Typically, six groups of stakeholder are involved: governments, international organisations, non-governmental organisations, business sector, technical communities, and academic organisations.
Myth	Myths represent implicit belief systems that express the fears, desires and aspirations of a culture, such as the myth of the 'heroic journey'.
	N
Narrative	The telling of a story or plot through a sequence of events. In the context of a media text, it is the coherent sequencing of events in time and space.
National assessment	A tool for providing feedback on a limited number of outcome measures that are considered important by policy makers, politicians, and the broader educational community (World Bank).
Network	Computers that are linked together, either by wires or wirelessly. These linked computers could be in a classroom, an office building or in different parts of the world.
News	The communication of information on current events through print, broadcast media, Internet or word of mouth to a third party or mass audience.
News media	The section of the mass media that focuses on presenting current news to the public. It includes print media (e.g. newspapers and magazines), broadcast media (radio and television), and increasingly, Internet-based media (e.g. World Wide Web pages and blogs). Content organized and distributed on digital platforms.
Newspaper	A regularly scheduled publication containing news, information and advertising, usually printed on relatively inexpensive, low-grade paper, such as newsprint.

News values	Sometimes called news criteria, they determine how much prominence a news story is given by a media outlet, and the attention it is given by the audience. Some of the most important news values include frequency, unexpectedness, personalization, meaningfulness or being conflict-generated.
	O
Online	To be connected to the Internet or a computer network.
	P
Paper-and-pencil test (PP)	A general assessment tool in which the respondent needs to read questions and respond in writing. Several respondents can be assessed at the same time or at different times. Easily adapted to environments where computers are not available for testing, or the target population is not familiar with new ICTs.
Participation (civic)	Participation is at the heart of democracy, with its main aim to ensure that each individual can take his or her place in society and make contributions to its development. It is an important element of democratic practice and crucial to decision-making processes, considered a cornerstone of basic human rights.
Professional learning	The additional skills and knowledge that teachers acquire in their work, beyond what they learned to become qualified teachers, e.g. through courses, programmes, conferences, seminars, events and workshops, from colleagues, through experience and experimentation, personal research and reflection, and through membership of professional networks and associations. Sometimes referred to as 'professional development' or 'CPD' (continuous professional development).
Programme	Another word for software, application, package, e.g. Microsoft Word, or Adobe Photoshop. The set of instructions loaded into a computer that enable it to provide specific functions, such as word processing, spreadsheets, presentations, databases, and image editing.
Pluralism (media)	Characterized by a diversity of media outlets, both in terms of ownership (private, public and community) and types of media (print, radio, television and Internet). More broadly, pluralism in society is characterized by a situation in which members of diverse ethnic, racial, religious or social groups maintain an autonomous participation in and development of their traditional culture or special interests within the confines of a common civilization.
Podcasts	Audio and video media files that are released periodically and may be listened to offline on electronic devices.
Poor governance	Characterized by arbitrary policy-making, unaccountable bureaucracies, unenforced or unjust legal systems, the abuse of executive power, a civil society unengaged in public life, and widespread corruption.
Popular culture	The totality of ideas, perspectives, attitudes, themes, images and other phenomena that are preferred by an informal consensus in the mainstream of a given culture, especially Western culture of the early to mid-20th century and the emerging global mainstream of the late 20th and early 21st centuries.
Press	Print media responsible for gathering and publishing news in the form of newspapers or magazines.
Print media	Media consisting of paper and ink – reproduced in a printing process that is traditionally mechanical.

Production	The process of putting together media content to make a finished media product. It can also refer to the process of creating media texts as well as the people engaged in this process.
Propaganda	A form of communication aimed at influencing the attitude of a community towards some cause or position.
Public domain	A term applied to original creative works, including poetry, music, art, books, movies, product designs and other forms of intellectual property, such as computer programmes. Being in the public domain means that the creative work can be used for any purpose the user desires. Public domain items are considered part of the collective cultural heritage of society in general, as opposed to the property of an individual.
Public interest	The concept of general welfare or benefit to the public as a whole, in contrast to the particular interests of a person or group. There is no agreement as to what constitutes the public interest, but the term reflects the sense that some interests pertain to everyone, regardless of their status or position, and require action to protect them.
Public service media	Publicly funded media that are often required to play a role in supporting the public interest by providing balanced and diverse programming that is representative of the community as a whole.
Public service ad	A type of advertisement ('ad') that addresses some aspect of the public interest, rather than a product or brand.
Public sphere	The notion of a public space in which members of society can meet and freely exchange news, information and opinions on matters of common concern in public, on the basis of equality and inclusivity. The most influential modern theorist of the public sphere is Jürgen Habermas.
	R
Racism	The belief that the genetic factors that constitute race are a primary determinant of human traits and capacities and that racial differences produce an inherent superiority of a particular race.
Radio	Communication of audible signals encoded in electromagnetic waves; transmission of programmes for the public by radio broadcast.
Reflective thinking	The ability to think about what one is doing, to go beyond a take-it-for-granted mentality, and hence to make new discoveries (c.f. also critical thinking).
Regulation (media)	Refers to attempts to control or affect the behaviour of media organizations and media actors by developing and enforcing rules and codes for their behaviour.
	S
Self-regulation	Rules imposed by political or economic actors on themselves. For the media, self-regulation implies respecting codes of ethics and codes of practice without interference from any governing source or institution.
Sexism	Prejudice or discrimination based on gender, especially discrimination against women – behaviour, conditions or attitudes that foster stereotypes of social roles based on gender.
Skill	A learned ability to carry out pre-determined tasks often with the minimum outlay of time, energy, or both in a specific area such as communication, language, learning, mechanical, teaching, etc.

Social networking	Online connections with people in networks surrounding a common interest or activity. Social network activity includes people publishing profiles that provide information about themselves. 'Facebook' is an example of a popular social network.
Software	The programmes (see above) and data that give instructions to a computer on how to handle data or operations of various kinds. Examples range from office software that produces and manipulates data, to software that controls the shaping and editing of images.
Stereotype	A common form of media representation that uses instantly recognized characteristics to label members of a social or cultural group. It can have both negative and positive connotations.
Storyboard	Pictorial representation of a film sequence often depicted as a series of comic-book style drawings – part of a director's preparation for a film shoot.
Student-centred	Teaching styles or learning activities in which students are active rather than passive, in the sense that they undertake projects or investigate or experiment for themselves rather than listening passively to the teacher.
Symbolism	The use of symbols, including images, concepts and archetypes, to represent aspects of reality (e.g. bad cowboys wearing black hats and good cowboys wearing white hats).
	T
Target audience	The group of people to whom a media text is specifically addressed because of a set of shared characteristics, such as age, gender, profession, class, etc.
Teacher education	The course of study, usually provided by a university or other higher education institution, which qualifies a person to be a schoolteacher. Sometimes referred to as 'teacher training' or 'initial teacher training'.
Technology	Hardware used to create and communicate with media (e.g. radios, computers, telephones, satellites, printing presses, etc.). It is often used as another word for ICT, although strictly speaking 'technology' can mean almost any type of tool or applied knowledge. For example, pencil and paper, slates, blackboards and whiteboards are all types of writing technology.
Technology resources	Digital information, and digital hardware and software.
Television	The transmission of dynamic or sometimes static images, generally with accompanying sound, via electric or electromagnetic signals; the visual and audio content of such signals; and the organizations that produce and broadcast television programmes.
Text	Media text usually refers to the individual results of media production, both written audio and video, (e.g. a TV episode, a book, an issue of a magazine or newspaper, an advertisement, etc.).
Tier	A layer, ranking or classification group in any hierarchy.
Tool	Digital hardware and software (as in digital tools).
	U
User-generated content (UGC)	Various kinds of publicly available media content that can be produced by the users of digital media. Those consuming the content therefore also produce content. Also known as consumer-generated media (CGM) and user-created content.

V	
Visual learning	A style of learning based on absorbing images or by watching demonstrations.
Visual media	Media that rely on images to communicate meaning (e.g. television, film, the Internet, etc.).
W	
Web content	Information on websites.
Web 2.0	Applications that facilitate interactivity and allow users to design their own software features. Web 2.0 applications emphasize the importance of collaboration and sharing.
Website	A collection of web pages, images and data with a common Uniform Resource Locator (URL) (see World Wide Web below).
Wiki	A website usually maintained by more than one person, where users collaborate on content. They often have multiple, interlinked pages and content including commentary, description of events, documents, etc. A wiki differs from a blog in that its content is usually updated by multiple users and a larger variety of materials can be downloaded and uploaded onto it.
World Wide Web	A service operating over the Internet that enables large volumes of content to be available by providing three key functions: a publishing format, HyperText Markup Language (HTML); an address for each piece of information (known as its Uniform Resource Locator or URL); and a means of transferring information, through the HyperText Transfer Protocol (http).

Endnotes

1 *UNESCO, Institute of Statistics. Online glossary [accessed 17 April 2013] http://www.uis.unesco.org/Pages/Glossary.aspx [accessed 17 April 2013]*

2 *For the preparation of the MIL Assessment Framework, several alternative terms were reviewed. The suggestions for alternative names are presented in Annex A. The major concern was to avoid a mechanical combination of the concepts, particularly media literacy and information literacy. UNESCO decided to use the term MIL, as it brings together information, media, ICT and digital aspects into a single holistic concept.*

3 *UNESCO Information for All Programme (IFAP) http://www.unesco.org/new/en/communication-and-information/intergovernmental-programmes/information-for-all-programme-ifap/*

4 *http://www.unesco.org/new/en/communication-and-information/intergovernmental-programmes/ipdc/*

5 *http://www.unesco.org/new/en/communication-and-information/flagship-project-activities/unesco-and-wsis/homepage/*

6 *http://www.un.org/en/ecosoc/about/mdg.shtml*

7 *http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/*

8 *http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/linguistic-diversity-and-multilingualism-on-internet/normative-instruments/recommendation/*

9 *http://portal.unesco.org/en/ev.php-URL_ID=17721&URL_DO=DO_TOPIC&URL_SECTION=201.html*

10 *http://portal.unesco.org/en/ev.php-URL_ID=31038&URL_DO=DO_TOPIC&URL_SECTION=201.html*

11 *http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/In_Focus/Moscow_Declaration_on_MIL_eng.pdf*

12 *http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/news/Fez%20Declaration.pdf*

13 *http://portal.unesco.org/ci/en/ev.php-URL_ID=20891&URL_DO=DO_TOPIC&URL_SECTION=201.html*

14 *http://www.unesco.org/education/pdf/MEDIA_E.PDF*

15 *See Chapter 2. Tier 1: background questionnaire on national contextual data, teacher institutions, individual teachers. Tier 2 – assessment of individual competencies on MIL among teachers applying stratified random sampling of the teacher population in order to illustrate system-wide performance.*

16 *Teachers selected by applying a stratified random sampling method.*

17 *The three competency components are summarized and only key words used here. The details of the MIL competency standard, including three competency components will be described later in the chapter 2.*

[18] *UNESCO will be developing an assessment instrument of MIL competences targeting teachers in service and training in the near future.*

[19] *It is important to note that the UNESCO MIL Assessment Framework has been developed to assess the MIL competences of any individual, but paying special attention to secondary and tertiary education teachers in service and studying in teacher training institutions. The MIL Competency Matrix is a generic tool that could also be used for the development of assessment tools targeting other social groups. UNESCO will be providing a special instrument for the assessment of MIL competencies of teachers in service and training.*

[20] *Performance criteria are descriptions of guidelines or characteristics that are used to assess the required level of a performance, a product or a response. Performance criteria are also used to design and deliver instruction and to assess learning.*

[21] *There are three main levels of proficiency: basic, intermediate and advanced.*

[22] *'Component 1 – 'Access' as a key word in the Table 4.*

[23] *'Component 2 – 'Evaluation' in the Table 4.*

[24] *'Component 3 – 'Creation' in the Table 4.*

[25] *World Bank. (2012). Implementing a National Assessment of Educational Achievement. Washington DC: The World Bank. http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0,,contentMDK:22301663~menuPK:5495844~pagePK:148956~piPK:216618~theSitePK:282386~isCURL:Y,00.html*

[26] *http://unstats.un.org/unsd/hhsurveys/pdf/Household_surveys.pdf*

[27] *Rasch Analysis. http://www.rasch-analysis.com/rasch-analysis.htm [accessed 14 October 2013].*

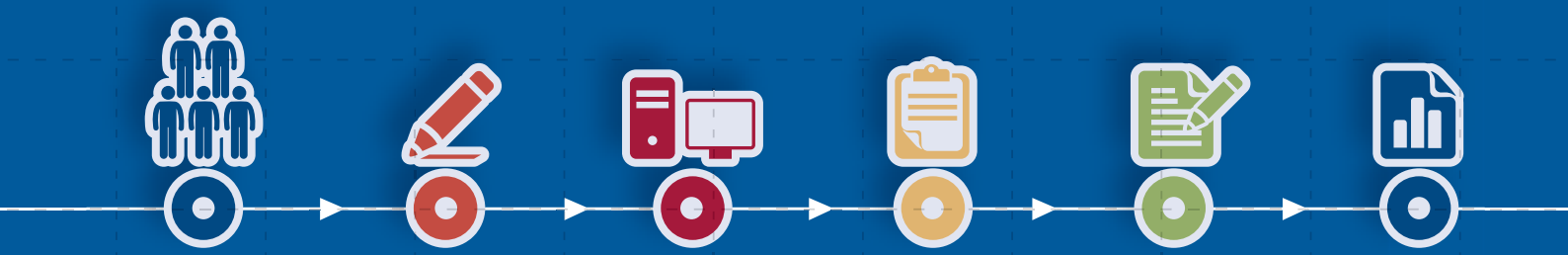
[28] *The World Bank series on national assessment on educational achievements is another resource for this exercise.*

[29] *http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf*

[30] *http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0,,contentMDK:22930156~pagePK:148956~piPK:216618~theSitePK:282386,00.html*

[31] *http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf*

[32] *http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf*



The UNESCO Global Media and Information Literacy (MIL) Assessment Framework is a practical tool developed by UNESCO to assist its Member States in monitoring the extent to which investments in an enabling environment are required to support the development of and competencies in Media and Information Literacy of their citizens – in particular teachers in service and in training – to enable them to participate in global knowledge societies.

This Global MIL Assessment Framework provides a conceptual and theoretical framework for MIL, and introduces the rationale and methodology for conducting an assessment of country readiness and existing competencies on MIL at the national level. It also includes practical steps for adaptation at national levels.

The UNESCO Global Media and Information Literacy (MIL) Assessment Framework: Country Readiness and Competencies was prepared by UNESCO Communication and Information Sector in close collaboration with UNESCO Institute of Statistics and supported by Japanese Funds-in-Trust to UNESCO.

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