

TRAINING TOOLKIT

The monitoring and evaluation
for information literacy
training initiatives in **Africa**:
a journey approach



Our sponsor



Our contributors



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This toolkit is largely the product of a consultative workshop held in Centurion, South Africa, on 15-17 February 2012. The workshop was framed around a series of interactive sessions with input from participants from the ABC Project Kenya, Aga Khan University Kenya, University of Botswana, Ethiopian AIDS Resource Centre, the Information Training and Outreach Centre for Africa (ITOCA) (South Africa), University of Johannesburg, Knowledge Leadership Associates, University of Malawi and Savana Signatures (Ghana).

The British Library for Development Studies, part of the Institute of Development Studies, has relied on a number of their partners, without whom this work would not have been realised. The below list does not do justice to the people involved or their contributions, and nor is it a comprehensive list of everyone involved, but nevertheless, Siobhan Duvigneau, Information Literacy Manager and BLDS would like to draw attention to the following key contributors: John Stephen Agbenyo,

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This version is intended as a first iteration of the toolkit for circulation to all respondents and partners to provide an opportunity for comment.

WHY A TOOLKIT?

Helping people engage effectively in their studies, their work, their communities and their personal lives.



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Why putting in the groundwork leads to better M&E.

A resource for life

Information literacy is the ability to acquire information, to interpret it and to treat it in an intelligent and critical manner. It is a vital skill for active citizens in all sectors of society and throughout all stages of life. It is a fundamental and integral part of learning, and its application goes way beyond the confines of formal education. Information literacy allows people to engage in effective decision making, problem solving and research. It enables them to take responsibility for their own continued learning, whether in their personal or professional spheres, or both.

Information skills, and familiarity with the uses of information, may be acquired during study at school, college or university, but they come to be applied, honed and adapted in later professional and/or community life. This continuous refinement of information skills is central to fostering well-rounded students, workers, business people, community leaders and others who are confident in their approach to information.

Regardless of any precise definition of information literacy (see **Box 1: Definitions of Information Literacy**), this toolkit is designed to help you to monitor and evaluate your information literacy training, and it is relevant to the wide range of competencies (i.e. aptitudes, attitudes and capacities) that underpin the truly information literate citizen.

Definitions

Box 1

Information Literacy

Definitions of information literacy differ in nature and scope, and vary from the straightforward to the aspirational. Here are a few recent examples of attempts to pin down exactly what is meant by the term:

- “Information literacy is the set of skills needed to find, retrieve, analyse, and use information” – Association of College and Research Libraries (ACRL) in the US.
- “Information literacy is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner” – Chartered Institute of Library and Information Professionals (CILIP) in the UK.
- “Information literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social,

occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion” – the 2006 Alexandria Proclamation on Information Literacy and Lifelong Learning, cited by UNESCO in its 2007 publication *Understanding Information Literacy: a Primer*.

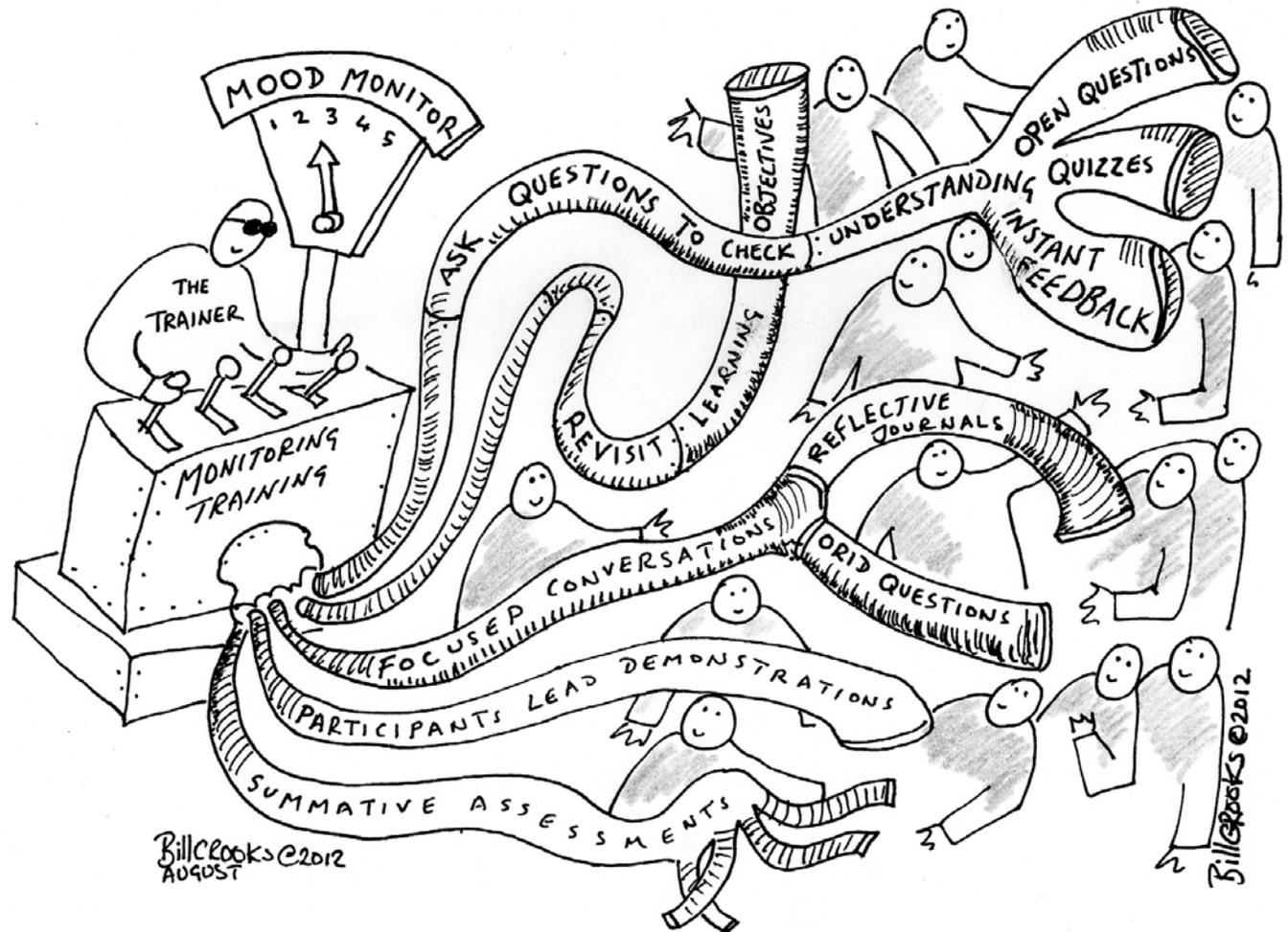
Hepworth and Walton consider information literacy as: “A complex set of abilities which enables individuals to engage critically with and make sense of the world, its knowledge and participate effectively in learning and to make use of the information landscape as well as contributing to it.”

Participants in the consultative workshop for this toolkit (see **Box 4: The Centurion Workshop and Information Literacy in the African Context**) proposed a further definition: “Information literacy is the ability to recognise the need for information, knowing how to find it, manage it and integrate it into your knowledge base, and communicate/apply it.”

The central role of training

Information literacy is a generic, non-specific subject, based on a range of aptitudes, attitudes and capacities. It is best acquired through *training*, in a nurturing environment where these competencies may be tried and tested safely. It is developed through experience, and adapted, improved and augmented as necessary for the individual/s being trained. The nature and quality of information literacy training interventions are therefore crucial (see **Box 2: Training in Information Literacy**).

This toolkit refers to measuring the competencies (knowledge, skills, attitudes, confidence and behaviours) of information literate individuals. It discusses the reasoning behind measuring indicators in these areas and the difficulties of measuring – and offers tools, intended to complement those that already exist, to help in this measuring.



Who is the toolkit for?

This toolkit is for you if you design and/or run information literacy training, i.e. you are a *trainer*. As a trainer you may work in a school, university or community library. You may, alternatively, be a specialist working for a non-governmental organisation (NGO). Or you may work in a different type of organisation – because information literacy training takes place in a wide variety of contexts.

Wherever training takes place though, this toolkit serves as an easy-to-use, practical aid to help you monitor and evaluate your training. It is designed to help you identify and demonstrate the usefulness and value of your training, and to continuously improve it.

It does this by prompting you to reflect on three broad sets of questions:

1. **What are you trying to achieve?** Considering the problems you are trying to address and the needs of your target audiences.
2. **How will you know you have achieved what you set out to do?** Considering how you monitor and evaluate the quality, outcomes and impact of your training initiatives, and the methods you use to identify evidence of the impact of your training.
3. **Why are you monitoring and evaluating your programme?** Considering who will use this M&E information and in what context, and how you can use this information to inform your decisions about future training?

This toolkit is, though, also for you if you are a recipient of training, i.e. a *trainee*, or if you work for an organisation that stands to benefit from training. In fact, all stakeholders who stand to benefit from citizens who are increasingly information literate will find this toolkit valuable.



Definitions

Box 2

Training in Information Literacy

Training in information literacy varies widely in approach and style according to the context, sector and organisational structure in which it takes place. Training may include:

- Face-to-face courses delivered to groups of learners in a classroom setting
- One-to-one tuition, printed manuals and guidance
- E-learning, delivered through a range of media, including interactive online materials, webinars, Skype and mobile devices, as well as offline DVDs

This list is not exhaustive, and different approaches, techniques and media may often be used in combination. The style and structure of your training may influence the choice of methods you use to monitor and evaluate it.



Information literacy definitions and standards

The definition of information literacy has been a subject of debate and is recognised as having a broader meaning than that described by librarians (such as library orientation or information seeking skills)¹.

Information literacy is context-specific. For example, the requirements for information literacy as an active citizen will differ from the requirements for information literacy in an education setting. It therefore demands a different set of indicators, leads to different outcomes and has a different purpose, i.e. impact. For instance, the information literacy competencies required in a household, such as identifying reliable information about childcare leading to effective parenting, will be different to those needed in a higher education setting, for example being able to conform to the norms of academic practice, such as explicitly respecting other people's intellectual property, or in a place of work where the ability to share information may be a key attribute.

The underlying factor in all of these settings is that an information literate person is prepared and has the confidence and motivation to be a lifelong learner². They consciously value the role of information in learning and will possess the know-how (knowledge) to “know how to learn because they know how knowledge is organised, how to find information and how to use information in such a way that others can learn from them”³.

When you design an information literacy programme it is crucial that you set up a system that is based on valid indicators for measuring the impact and successful rollout of your training programme. Information literacy is, on the one hand, a generic competency which underpins the acquisition and use of information to resolve problems and make decisions in social, occupational and educational settings. On the other hand, information literacy can vary according to the significance placed on specific forms of information literacy. Information literacy can also be viewed from an individual, organisational or social perspective. It is therefore essential that your M&E model focuses on assessing both the generic and the specific skills and competencies of an individual, in addition to their attitudes, values and behaviours⁴, and that these relate to the broader context within which these capabilities are applied.

Many international and national institutions have proposed models and frameworks for evaluating information literacy. They define valid indicators and levels of competence for measuring information capabilities in development, health and welfare, civil society, higher education and employability. The documents are prepared and published by international bodies such as the International Federation of Library Associations (IFLA) and UNESCO, as well as country associations such as the Association of College and Research Libraries (ACRL), Institute for Information Literacy (IIL), the National Forum on Information Literacy (NFL), the

Information Literacy Community of Practice (ILCOPSU), the Society of College, the Chartered Institute of Librarians and Information Professionals (CILIP), Society of College, National and University Libraries (SCONUL), the Joint Information Systems Committee (JISC), NordINFOLIT, and the Australian and New Zealand Institute for Information Literacy (ANZIIL).

Although we won't go into the detail of each of these standards, models and frameworks, we strongly recommend that you familiarise yourself with them. They have significant value in defining the indicators and competency levels of an information literate individual and will help you design your evaluation approach.

The international debate on the best system for evaluating information literacy competencies has resulted in the development of tools and instruments that facilitate the evaluation of information literacy programmes by level. Instruments include: Project SAILS, the CAUL information skills survey, the LAMP and PISA programmes. A number of references have been provided in **Box 3: IL Standards, Models and Frameworks** to help you locate these important documents, models and frameworks.

1. Information skills survey: Its application to a medical course, Evidence based library and information practice, 2007, 2:3

2. Information skills survey: Its application to a medical course, Evidence based library and information practice, 2007, 2:3

3. ALA Final report from the Presidential Committee on information literacy Washington DC, 1989

4. Evaluation of Information literacy programmes in higher education: strategies and tools, Miguel Angel Marzal García-Quismondo, Monograph "Information and digital competencies in higher education", July 2010

Resources / Recommended reading

Box 3

IL Standards, Models and Frameworks

Information Literacy Standards (Various) – Association of College and Research Libraries: <http://www.ala.org/acrl/standards> (accessed 23 Feb 2013)

Australian and New Zealand Information Literacy Framework, principles, standards and practice, A Bundy <http://www.library.unisa.edu.au/learn/infolit/Infolit-2nd-edition.pdf> (accessed 23 Feb 2013)

The SCONUL Seven Pillars of Information Literacy (Core Model for Higher Education) <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf> (accessed 23 Feb 2013)

'Towards information literacy indicators', a conceptual framework, R Catts and J Lau. http://www.ifla.org/files/assets/information-literacy/publications/towards-information-literacy_2008-en.pdf (accessed 23 Feb 2013)

'The big blue – information skills for students' – Final report, JISC, <http://www.jisc.ac.uk/media/documents/programmes/jos/bigbluefinalreport.pdf> (accessed 23 Feb 2013)

Project SAILS – <https://www.projectsails.org/> (accessed 23 Feb 2013)

LAMP – Literacy Assessment and monitoring programme <http://www.uis.unesco.org/literacy/Pages/lamp-literacy-assessment.aspx> (accessed 23 Feb 2013)

CAUL – International resources in information literacy <http://www.caul.edu.au/caul-programs/information-literacy/information-literacy-resources/international-resources> (accessed 23 Feb 2013)

OECD's PISA (Programme for International Student Assessment) <http://www.oecd.org/edu/school/programmeforinternationalstudentassessmentpisa/> (accessed 23 Feb 2013)

The Centurion Workshop and Information Literacy in the African context

Box 4

This toolkit is largely the product of a consultative workshop held in Centurion, South Africa, on 15-17 February 2012. The workshop was framed around a series of interactive sessions with input from participants from the ABC Project Kenya, Aga Khan University Kenya, University of Botswana, Ethiopian AIDS Resource Centre, the Information Training and Outreach Centre for Africa (ITOCA) (South Africa), University of Johannesburg, University of Loughborough (UK), Knowledge Leadership Associates (South Africa), University of Malawi, Researchers Information Network (UK) and Savana Signatures (Ghana).

Although participants formulated their own understanding of information literacy (see **Box 1: Definitions of Information Literacy**), we need not worry here about a perfect definition of the concept. Rather, we need to stress the importance of learners' abilities to make judgments about the quality of the information they use, and about how they might most appropriately use different kinds of information in different contexts. It may be helpful if we think in terms of the knowledge, skills, competencies and behaviours required in different contexts in Africa, and how they apply to learners – not only during their formal education, but throughout their lives in their varied roles as citizens and active members of society.

Below are areas of information literacy identified as important by respondents to a survey carried

out before the Centurion workshop, as well as by participants at the workshop itself:

- The nature of information
- General use of library resources
- Search and discovery, including 'smart' use of the Internet
- Evaluating sources and resources
- Referencing
- Citation
- Legal issues, including copyright and plagiarism
- Writing and authorship
- Defining research topics, and conducting research
- Information literacy professional development
- Bibliometrics
- Preservation of research outputs

But this list is far from exhaustive, particularly if information literacy is understood as broader than the traditional, library-centred view based on finding materials and deploying bibliographic skills.

The Centurion workshop also proposed other skills and competencies that trainers would like to see included as contributing to information literacy in Africa.

For instance:

- Information literacy in the research process
- Management, stewardship and preservation of information and data
- Synthesis and integration of data and information
- Use and implications of social media in the research process
- Publishing and promoting the results of research
- Epistemology
- Forms of knowledge and its representation
- Relationships between data, information, knowledge and understanding
- Building knowledge communities
- Communication and presentation
- Presentation and packaging of information for different audiences
- Visualisation and infographics
- Information literacy in the community
- Advocacy for community organisations and for small and medium-size enterprises (SMEs)

TOOLKIT PRINCIPLES

How a 'virtuous' journey can help clarify what you do, how you do it and how to make it better next time.



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Spreading good practice, acknowledging roots.

An African initiative

This toolkit was developed in response to specifically African needs and concerns. It is the work of European partners (Institute of Development Studies (IDS), Research Information Network, Orla Cronin Research and University of Loughborough) in close consultation with committed individuals from a range of African institutions, both academic and non-academic.

Initial consultation for the toolkit, in the form of a questionnaire-based survey, took place in November 2011. There were over 30 responses from across Africa

and beyond, and these formed the basis for a consultative workshop in Centurion, South Africa (see **Box 4: The Centurion Workshop and Information Literacy in the African Context**). Workshop participants agreed to act as an informal network to help validate the toolkit as it was developed, and an early draft of the toolkit was circulated for comment in March 2012. A fuller version was circulated in May 2012. Feedback from those consultations has served to refine the toolkit to its current form.



Contributors to the M&E Toolkit (see Acknowledgements, page 4)



The M&E journey

This toolkit takes the form of a 'journey'. It starts before any training is designed and is delivered with an investigation of the current state of information literacy in the target group and a determination of their training needs. It moves on through the process of making decisions on training interventions, implementing practical solutions and analysing the wider impact of these interventions within organisations and beyond. As this, in turn, can lead to the emergence of a new *baseline* (i.e. the new capabilities of individuals or organisations), which can lead to the determination of new needs, and so on, the journey never ends – and so it starts to take the form of a continual, and virtuous, cycle.

There are nine stages for each complete cycle of the M&E journey (see **Figure 1: The M&E journey**) and the toolkit follows these nine consecutive stages in the later part of the toolkit.

Completing all nine stages will provide you with the necessary know-how to understand and/or to conduct M&E. It will also enable you to interpret and use the results of the M&E process to improve or adapt future training interventions and to raise the level of information literacy for your target audience – so making your own particular M&E journey a 'virtuous' one.

The M&E journey

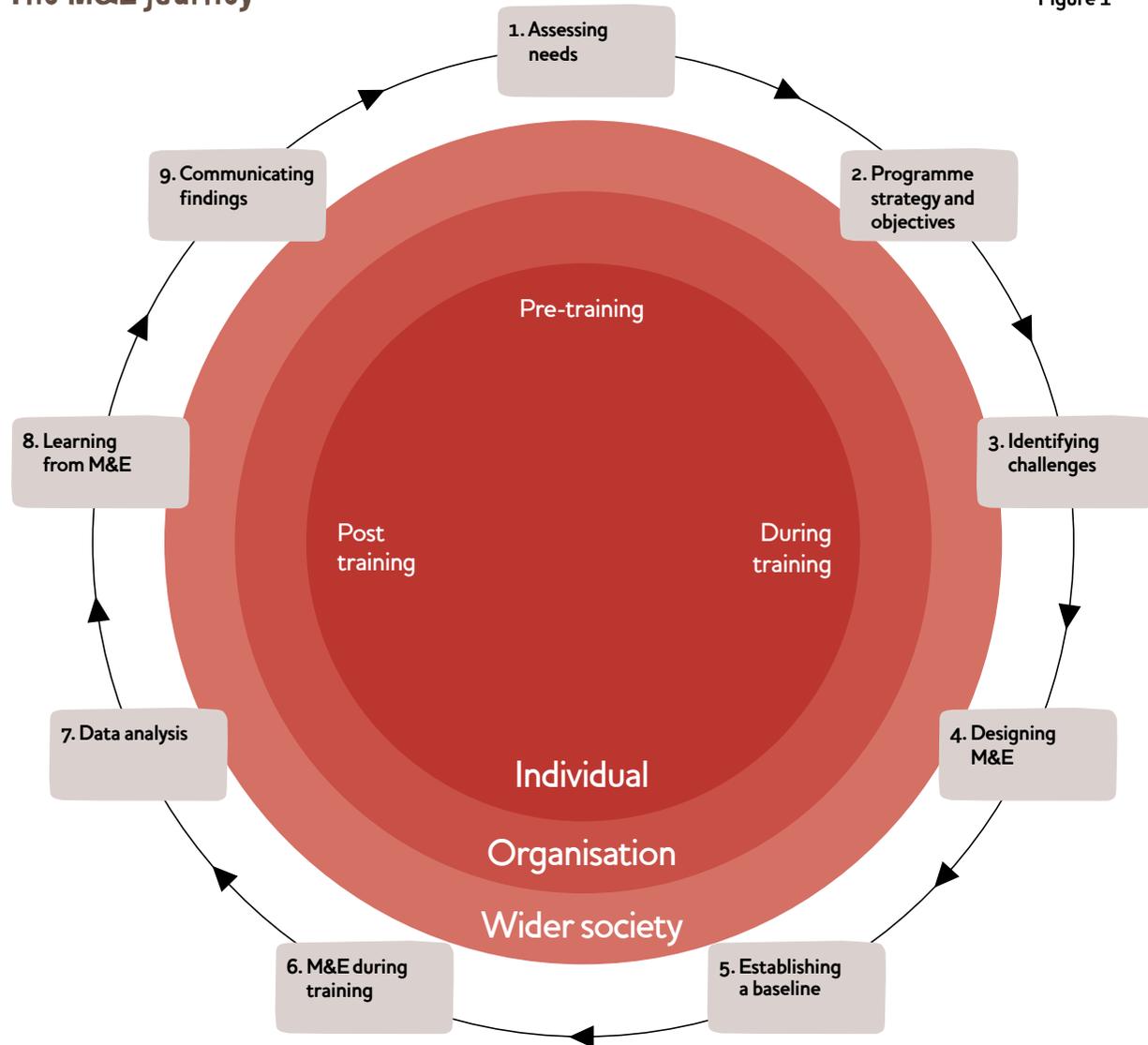


Figure 1

Using the toolkit to share good practice

In the same way you are likely to use practical examples of good information literacy practice in your training interventions, so we will, in this toolkit, use practical examples of M&E in information literacy training. We hope these case studies will illustrate to you the many different ways you can monitor and evaluate information literacy training and perhaps inspire you to adopt or adapt them as you see appropriate.

You can help us build a repository of good M&E practice in information literacy training so we can continue to share and learn and develop. At Annex 3, a template is provided which you can use to describe your intervention and the way in which you monitored and evaluated it. In this way, as a community we can continue to build good practice M&E for information literacy.

An evolving resource

This toolkit has been designed to serve a range of African audiences. In its current state, it is broad and generic in nature, and it can be applied to training interventions in a wide range of settings. There is no reason why, though, it could not be developed into a more sophisticated instrument. Different versions could evolve for more specialist use by specific groups of users, e.g. in different geographical locations or working in different domains such as health. Indeed, we anticipate that the toolkit *will* develop in the light of suggestions received by trainers and others who use it.

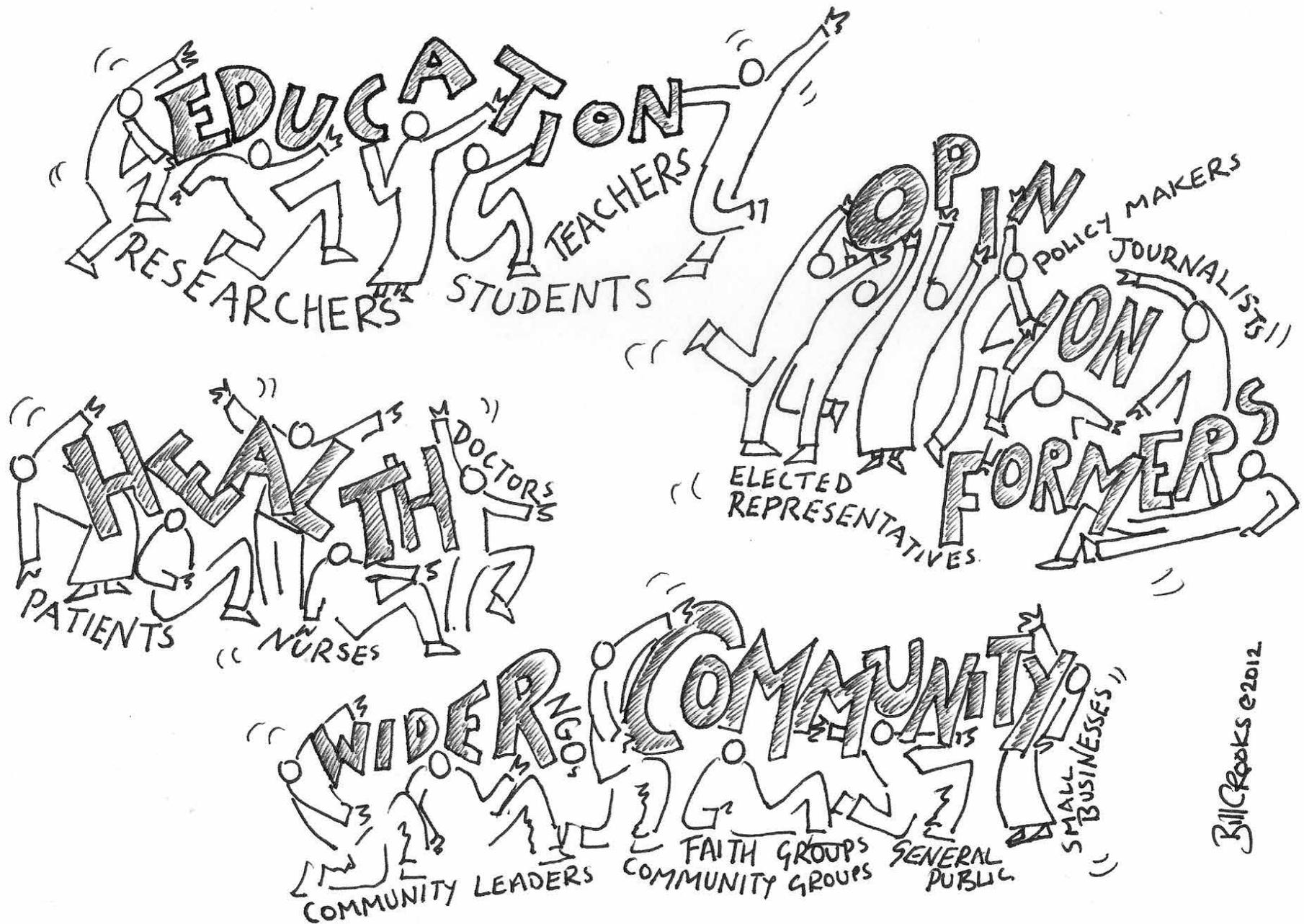
Having stated this, it is important to keep in mind that the toolkit was designed thanks to the active participation of a range of stakeholders in Africa. As they are the end-users and beneficiaries, it is right and proper that the toolkit is 'owned', presented and disseminated collectively by these same stakeholders. Theirs will be a key role in the toolkit's further development and refinement, its use as a dynamic and interactive resource, and its possible adaptation for more specialist purposes.

Toolkit adaptations

Monitoring & evaluation is a generic concept and therefore can be applied to a variety of different contexts and disciplines. As such, the toolkit could well be adapted to suit your institution and individual needs.

For example, the University of Johannesburg (UJ) are planning to create a training course based on the contents of the toolkit. This programme is intended for UJ faculty and information librarians as part of their formal training academy in 2013. The adaptation and customisation of the toolkit for training purposes offers BLDS / IDS a valuable opportunity to identify how different institutions test the usefulness of the toolkit.

We encourage institutions to adopt these approaches but kindly request that you credit IDS and inform blds@ids.ac.uk of your intention so that we can engage with your institution.



Bill Crooks e2012

TOOLKIT PRACTICES

From a run-through of the theory to a step-by-step guide to practising successful M&E.



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Stage 7: Data analysis

Stage 8: Learning from M&E

Stage 9: Communicating findings

The value of M&E

There is often confusion regarding monitoring and evaluation. A simple story can help to clarify these two terms:

A group of women decide to have a community feast to celebrate the harvest. They get a grant from a community group, but that grant comes with strings attached: they must monitor and evaluate the feast.

So what does this mean?

The women's monitoring efforts will be a way of checking that the feast actually happened, as intended. They may monitor the *inputs*, for example which ingredients they purchased or had donated, and the amount of time it took to prepare the dishes. They may monitor the *outputs*, for example how many invitations were sent and how many people turned up to the feast.

However, they will evaluate the *outcomes* – the actual effects of the feast, for example did people enjoy themselves, did the feast bring the community together, were new relationships formed and do people want to do it again next year?

This story shows that we need to monitor for an evaluation to make sense. If the feast was a disaster, it might have been simply because no-one knew it was happening. However, we can also see that the monitoring data “we cooked seven pots of rice” doesn't tell us a great deal on its own.

We can see from this that monitoring and evaluation are related concepts, each involving different processes. Though the borders between monitoring and evaluation can become blurred, they tend to vary in terms of their purpose, timings, who carries them out, who they are 'done to', the methods used, how they are implemented, and the meaning and implications of the conclusions.

In the context of information literacy training, monitoring is generally an ongoing activity, involving the regular collection of data on the effectiveness and efficiency of a given training intervention. Data are gathered during the training itself, to check progress and to collect evidence that what was planned is in fact being delivered, and that people are attending. Monitoring tends to focus on outputs – the actual delivery of the intervention, e.g. number of trainees, number of contact hours etc.

Evaluation focuses on outcomes and *impact*, and is therefore more periodic. Evaluation takes place both during and after the training intervention, to examine whether it has met its objectives, i.e. whether the anticipated benefits are being or have been realised at an individual or organisational level. It may involve the evaluation of both process (how the training was or is being delivered) and outcomes and impact (how much improvement is evident, how much the improvement varies between different learners, whether there are changes evident that were not anticipated, what effect the training had on the broader environment of the trainees and so on).

The aim of evaluation is to examine the nature, scale and significance of any improvements produced by your training interventions. It is also to identify any changes that could improve your training, either during the course of the training itself, or in the future.

For more on outputs, outcomes and impact, see **Box 5: Outputs, Outcomes and Impact**.



Definitions

Box 5

Outputs, Outcomes and Impact

Outputs refer to the extent to which a training intervention was delivered. For example, outputs may include the number of contact or study hours achieved, the number of trainees who attended (alongside some information about the trainees, e.g. their gender).

Outcomes refer to the knowledge and skills trainees have acquired that indicate information literacy, critical thinking and independent learning.

For example, in an academic environment, outcomes could include the ability to:

- Define information needs (e.g. by listing key terms or concepts, or creating mind-maps)
- Incorporate a broad range of academically authoritative sources in reports
- Provide evidence of synthesising different viewpoints
- Reflect critically on other people's contributions
- Include detailed references and bibliography

In a community setting, outcomes could include knowledge of authoritative information sources and the ability to generate information drawing on other information.

Outcomes may also be defined as what trainees can do as a result of what they have learned, notably with regards to changes in attitude, confidence, behaviour, performance and practice. For example, outcomes could include:

- The ability to use a wider range of vocabulary to describe and evaluate an information source
- The use of more sophisticated methods to search for information, such as the use of Boolean logic
- An awareness of what information is required to resolve a problem and how that information will be applied
- A positive attitude toward the opportunity to learn independently
- An ethical approach to the use and application of information

Impact indicates the actual effects training interventions have on the broader environment in which trainees operate, and the extent to which trainees are able to influence that environment as a result of the training. In information literacy training, impact relates to whether the information a person can now process is being applied or used in a way that enables people to achieve their objective/s.

An example of this might relate to trainees achieving good academic results. Has this enabled the individual to participate in a community of practice, build on existing knowledge, create new knowledge and/or tackle shared challenges? Has it enabled their organisation to take advantage of opportunities in the market place or the community to advocate for resources? Has it meant they can now share information and knowledge with others in a similar context to achieve common goals? Has it enabled the individual to make evidence-informed decisions or use evidence in policy-making processes? Has it helped the individual improve their research capacity?

Well-planned and rigorous M&E can help you to:

- Clarify the objectives of your training interventions
- Track the delivery and outputs of your training interventions
- Establish whether you have met your objectives (by examining outcomes and impact)
- Learn how to improve your interventions, generate new ones or advocate for resources.

A note on terminology: on occasions, when we are discussing methods which relate very specifically to evaluation of training, we have used the term *assessment*. This is not a general M&E term, but is specific to training and other educational contexts. We see assessments as being part of the contract between trainer and trainee. An assessment is unlikely to be anonymous, and the trainee will be given their results so they can see what progress they are making. Assessment data can be aggregated and used for M&E, and many assessment methods in fact lend themselves well to M&E.

In this toolkit, we distinguished between M&E *approaches*, M&E *methods*, M&E *tools*, and M&E *technologies*, as these can often cause confusion (see **Box 6: Approaches, Methods, Tools and Technologies**). We will learn more about methods, tools and technologies later. For now, we will consider approaches.

Definitions

Box 6

Approaches, Methods, Tools and Technologies

To make it easier to compile the toolkit, we have adopted the following definitions in order to cluster similar issues together. You may find these terms used slightly differently within other M&E resources, but what is important is that you are aware of these different elements of your M&E plan.

An M&E approach is its 'philosophy', referring to the way in which the monitoring and evaluating is designed and implemented. Different approaches embody different values and judgments, with their structure and focus encompassing what they regard as important to evaluate.

Methods (or methodology) are the way in which you actually collect data. Interviewing is a method, as is a survey.

Tools are elements of methods. A particular method, e.g. a focus group, may involve the use of a particular tool within it as an exercise or activity, e.g. using a focused-discussion tool (e.g. ORID), creating a collage, or conducting a word association activity.

Technologies are the physical ways in which you collect the data. Paper and pencil is a technology, as is iClicker (an instant response device). Electronic technologies, such as email, web, mobiles etc. enable us to implement particular methods and tools more efficiently, creatively or cheaper.

Choosing an approach

When you choose an approach you need to consider the series of values and judgments that come with it. This is because approaches often embody assumptions about what or who the evaluation is for, and how outcomes and impacts should be framed. For example, some approaches borrow from the private sector or the discipline of economics and concentrate on 'value for money' or 'social return on investment'. These approaches concentrate heavily on outcomes, but are not particularly interested in how these have been achieved.

Recently in the development sector, greater emphasis has been placed on the process which unfolds during an intervention. This may include considering unanticipated outcomes such as the changes in relationships that occur during an intervention, or the changes in behaviour.

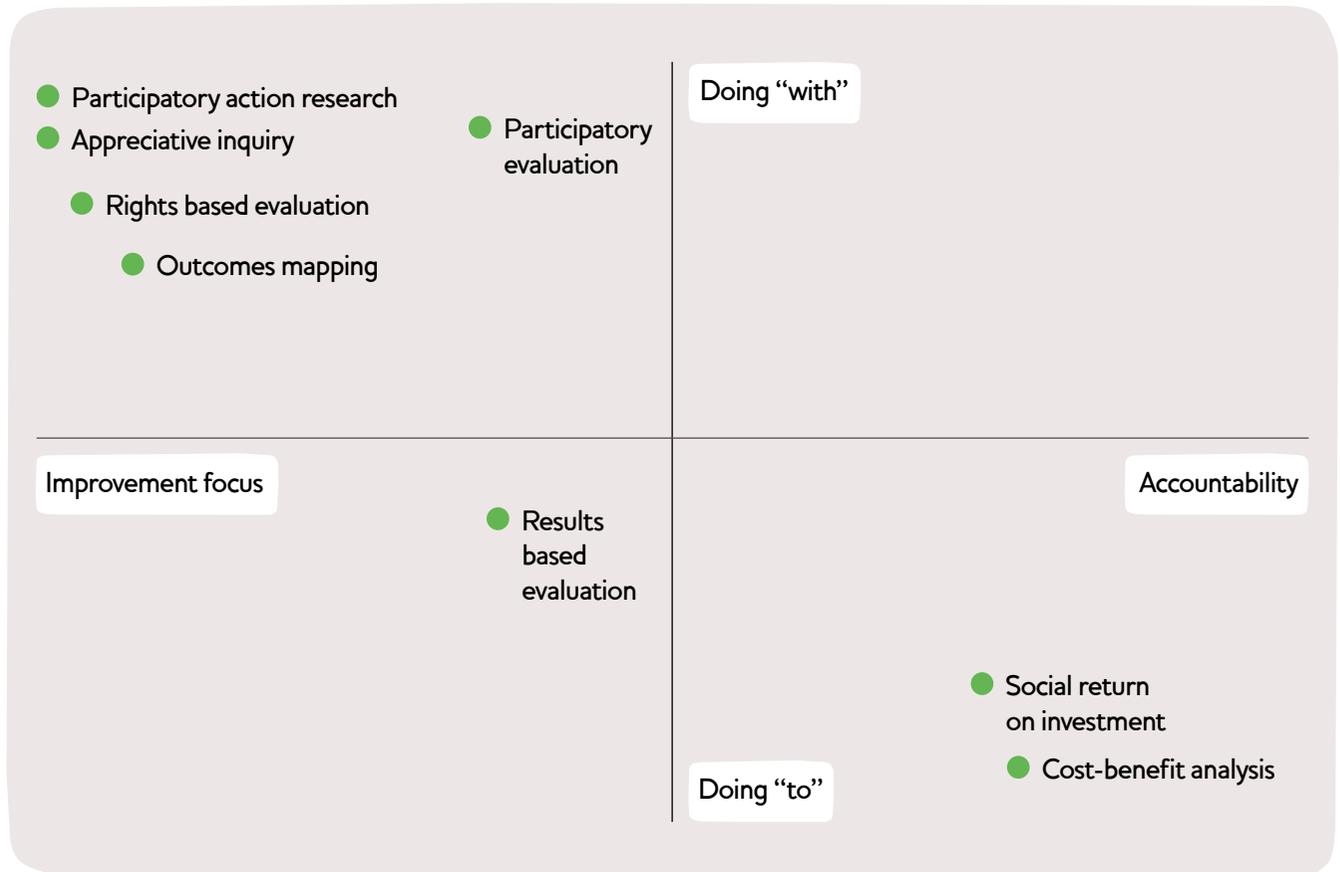
There is also now an emphasis on a participative approach to M&E. In this, all stakeholders are actively involved in the M&E process

To make sense of the many M&E approaches in circulation, it is useful to try to classify them according to their different values. The matrix below (see **Figure 2: A matrix of M&E approaches**) is an attempt to do this. It shows whether approaches are more concerned with process ('Improvement focus' on the matrix) or outcomes ('Accountability'), and whether M&E is 'done with' or 'done to' participants.

Clarifying your values before you start gathering data is a useful exercise no matter who you are. However, it becomes particularly important where a number of different people may be involved over a longer period of time, where the values may get lost. This is particularly a

A matrix of M&E approaches

Figure 2



risk when creating organisation-wide M&E systems which are expected to last for a number of years and be applicable to a range of different interventions.

The demand for evidence

The need to use resources effectively and efficiently, especially where resources are limited, has occupied strategists, policymakers and practitioners for generations. The demand for evidence of the progress or success of a project or programme is great, and in fact it is currently increasing. The area of information literacy training is no different from other areas in experiencing this.

Donor organisations and others who stand to win or lose from information literacy training (stakeholders) seek evidence because it may, for example:

- Help them decide whether to continue funding an intervention
- Help them choose between competing demands for funding
- Establish whether their financial resources are well spent

Depending on whether they are seeking proof or understanding or learning – or a combination of the three – they may favour different approaches to M&E. For example, most donors are interested in supporting interventions that provide sustainable and long-term solutions. They will expect the M&E evidence to demonstrate how the training beneficiary will apply the information literacy competencies in their work either through interviews statements or survey results. In addition, some donors may be interested in learning and increasing awareness of the institutional, environmental or personal challenges a trainees might face in acquiring or using information. They will be particularly interested in the learning outputs (e.g. reports or publications) and expect the project team to share this information with others in the information literacy / capacity building field.

Case study 1

Improving evaluation through practitioner participation

The IDS Impact and Learning team (ILT) is responsible for supporting IDS's Knowledge Services (KS) department to undertake planning, evaluation and learning. ILT is always looking for new and creative approaches to make planning, evaluation and learning more engaging and effective and also for ways to embed these processes in the everyday activities of KS staff and their partners. In 2010, members of ILT developed a process called Facilitated Self Evaluation (FSE) with the following three objectives:

- To improve colleagues' understanding and experience undertaking evaluation
- To improve the quality of project evaluations within the department
- To improve the value that these evaluations deliver for people 'working on the ground'

FSE is a process for undertaking participatory evaluation of products delivered in partnership. The whole evaluation process is facilitated by an independent person and is carried out by a practitioner team with first-hand experience delivering the project being evaluated. It results in evidence-based evaluative judgments that can lead to quick improvements in project delivery.

Specifically, the FSE process is built on three concepts.

- *Facilitated* – an evaluation expert supports the project team to undertake every stage of the evaluation. The facilitator's role is to advise on appropriate tools and approaches that will increase the rigour of the evaluation design, data collection and analysis. In particular, the facilitator supports the team to use critical questioning approaches to challenge each other to remain true to the evidence (mitigating bias), to use evaluative thinking approaches to push analysis to a deeper level (maximising the depth of insights) and to remain focused on the evaluation questions (mitigating scope creep). It is helpful for the facilitator to have some understanding of the project and the particular field, but not essential.
- *Self* – a practitioner team with firsthand experience delivering the product or project under scrutiny has primary ownership for the evaluation and carries out all the activities in every phase of the evaluation process (design, data collection, analysis and reporting). The team has the deepest understanding of their project history, rationale, assumptions and information needs, and an evaluation designed and undertaken by its members will have greatest relevance to and impact on their work. The team usually consists of six to 10 people who can commit

Case study 1 (continued)

five to 15 days throughout the FSE. A mixed practitioner team made up of staff members from both sides of a project partnership and from varied roles and levels of authority helps bring different perspectives to the evaluation and an element of challenge that can mitigate bias and ‘group think’.

- *Evaluation* – the FSE process is fundamentally about making evidence-based judgments. FSE assumes that project teams undertake a multitude of review activities every year (for strategic review, reporting to donors, future planning etc) but that many of these processes rely solely on one source of evidence (e.g. the practitioner team’s observations), lack research rigour and are framed to serve a particular agenda (e.g. to justify continuation of funding). When undertaking FSE, teams can test and triangulate their personal experiences of delivering a project with evidence gathered through rigorous design, collection and analysis methods, so increasing the validity of their own experiential conclusions. An evaluation undertaken using an FSE approach should stand up to scrutiny by an independent reviewer.

In practice, the full FSE process takes 12-16 weeks. During that time, a facilitator will guide a practitioner team through at least two face-to-face workshops: an inception workshop, to set out the evaluation design, and an analysis workshop, to bring together all of the data that has been collected and to draw some evaluation conclusions. There will be a period of data collection, which could include surveys, interviews, gathering website statistics etc. Finally, the facilitator will set the team on the path towards reporting its findings. FSE takes courage and commitment from a practitioner team. Members need to commit the necessary time to the process and be open-minded about discovering successes and failures within their work.

- You can read more about FSE in the forthcoming IDS Practice Paper in Brief <http://www.ids.ac.uk/publications/ids-series-titles/practice-papers-in-brief>
- For more on FSE, see **Stage 8: Learning from M&E**.

Case study 2

Outcomes mapping

The IDS Impact and Learning team (ILT) is responsible for supporting IDS’s Knowledge Services (KS) department. There are relatively few examples where particular approaches have specifically been applied to information literacy interventions. However, in 2012, a project funded by IDS and facilitated by the Department of Information Studies at Loughborough University, involving the University of Botswana, the University of Zambia and Mzuzu University in Malawi, used an Outcomes Mapping approach to M&E to help identify current activities, future aspirations and activities, and challenges associated with developing information literate, critical thinking, independent learners.

Outcome Mapping is a participative M&E approach which places particular emphasis on the ‘journey’, i.e. the process, and the changes and the relationships formed during that process. (see **Case study 3: An institutional approach to assessing information literacy in southern Africa**).

M&E in action Stage 1: Assessing needs

? Key questions

Assessing your trainee's needs

- What do potential trainees know and understand now? What are they able to actually do now?
- What attitudes do trainees possess? Do they value information literacy, and understand its role in achieving their social, occupational or educational goals?
- What do potential trainees need to know, understand and be able to do to fulfil their roles and tasks?
- What organisational goals are you hoping the training will address?
- What must be achieved to meet trainees' needs, and the organisation's or wider community's goals?
- What is the most effective way of reaching potential trainees?
- What has already been done or achieved? What information literacy training interventions have already taken place?

You may feel you have a good understanding of your training cohort's information literacy knowledge, skills and attitudes. Even so, it is good practice to test your assumptions.

To do so, you need to capture current information about your training cohorts' information literacy capabilities and their perceptions of their competencies and skills. As you do this, you need too to consider the competencies you would expect to see in the cohort by referring to the information literacy standards, models and frameworks relevant to them (see **Box 3: IL Standards, Models and Frameworks**). In determining what is known and what is unknown in your trainees, and comparing it with what you might expect at different competency levels outlined in the relevant standards, you can better design your training intervention to address the skill and competency gaps (i.e. the unknowns) and so meet your trainees' training needs.

Identifying information literacy training needs starts with a broad identification of the individuals or groups who may need such training. For example, undergraduate students in their final year may need training in referencing systems, or junior researchers may need techniques for scanning articles quickly to determine relevancy to their research.

You need to consider:

1. The **roles** of these potential trainees and what they need to **know** and **understand** to meet their objectives in these roles. This means you need to understand the contexts in which they operate. Understanding roles and goals helps the trainer to understand the type and level of training required. For example, the trainee may need access to health information but have little

experience in accessing information or may not be digitally literate. The context may pose limitations too, such as a lack of access to the internet. This may influence the information literacy training, e.g. placing more emphasis on discussion and how information can be shared within the community or by connecting with other organisations.

Understanding context helps to ensure that training is effective and enables the trainer to communicate with trainees and show how new knowledge can help them achieve their goals or complete their tasks (whether these are personal or professional or community-driven).

2. How these potential trainees currently **perform** and **report** on their performance in their roles. This may be through self-reporting, peer or line-manager appraisal or some other means.
3. The current **attitudes, values** and **perceptions** of these potential trainees to lifelong learning skills, information-seeking behaviours and critical-thinking skills. How broad is their conception of information literacy? Do they think of it as a library-orientation skill only (e.g. using e-journal databases), or do they recognise that it can improve their research and problem-solving activities, as well as help them become more active citizens and promote social inclusion?

! Tips

Always assess needs on a case-by-case basis. Even apparently similar stakeholders (for example researchers) will operate in a specific context and so may anticipate different learning outcomes.

Gathering data

To find answers to all these questions, you need to gather data on your target individuals and groups. Data gathering tends to be either through traditional survey-based approach, where trainers elicit data from their potential trainees using needs-analysis surveys, interviews etc or, alternatively or in combination, highly participative approaches can be used, generally via discussion and workshops in which the participants reflect on and define their needs. The latter are usually facilitated and various techniques can be applied, such as cause-and-effect diagrams, identification of situations where information is needed, barriers and 'helps' etc. These methods are described in more detail below.

Survey-based approaches, often *quantitative*, are relatively quick to apply and data are easily analysed. Participative approaches, tend to be more complex, requiring genuine engagement with the audience and involving discussion and negotiation. They tend to result in *qualitative* data that may be harder to analyse. However, techniques where simple, participative techniques are used to gather data, such as flip charts or stickies are very effective and

cheap, plus data can be quickly captured and stored using photographs. Participative approaches tend to require more commitment from the participants but tend to result in greater engagement.

In either participative or survey-based approaches, data gathered can be either quantitative or qualitative. Quantitative tends to focus on the presence of certain characteristics, the 'what' and the 'how', for example knowledge of sources of information, the usage of sources of information, and the techniques people use to gather, manage or communicate information. Quantitative data tends to be associated with statistical analyses that imply the group is representative of a larger community. However, the term quantitative is also associated with any data that is made up of numbers. The two are not necessarily the same.

This quantitative approach tends to be effective when the trainer has a reasonable understanding of the information literacy that may be appropriate for the audience but wants to get an overview of people's information behaviour so that training can be tailored. This can also be useful for evaluating the impact of the training and the changes that have taken place as a consequence of the training.

Qualitative data are data that are relevant to a group of people that is not statistically able to be generalised. They also tend to be made up of words. Qualitative data tend to be useful when one is exploring a situation and the variables are not known. For example, data may be in the form of statements by trainees about their perception of their need for information and the difficulties they encounter accessing information. Qualitative data enable

a better understanding of 'why' they do what they do and their values or interpretations of situations.

Qualitative data are often gathered through interviews and focus group/discussions. These methods can be structured using methods, such as grounded theory or Outcome Mapping. The latter provides a framework that enables people to participate and define their vision, mission, learning outcomes and progress indicators.

Methods you could consider using include:

- **Needs analysis surveys/diagnostic tools.** These could be simple *yes/no questionnaires* or more complex, graded questions in which people assess themselves on, for example, a five-point scale. The latter could include questions about their perceived competence on various tasks, such as finding and using information. Surveys that assess people's knowledge before an intervention tend to be called *pre-diagnostic tests* because they can be followed by *post-diagnostic tests* that can indicate changes in competencies as a result of training. Such tests often include questions that assess people's knowledge of and usage of sources of information, or specific techniques to search for or process and communicate information, or knowledge of ethical issues associated with the use of information. In other words what they do or don't do and knowledge that they have or don't have. Data tend to be gathered through closed questions (yes/no, or numeric scales) that enable quantitative data to be gathered. However, open questions can be included and provide qualitative data where the respondent can explain why they have answered in the way that they have.

As well as assessing needs, programmes based on pre-assessments of trainees' current capabilities and contexts are more likely to be tailored to those needs. Pre-assessments can also help you make an explicit link between the learning concepts and trainees' real-world problems.

Importantly, a pre-training diagnostic or test can be used as a 'control' at the end of a training intervention to assess impact by measuring the *distance travelled*. In M&E, distance travelled is a valuable tool for measuring the outcomes of interventions. When used in a training context, the distance travelled refers to the progress a trainee makes towards achieving a learning outcome as a result of participating in a training intervention. For more on this see **Stage 5: Establishing a baseline**.

There are a number of validated instruments you can use to evaluate your trainees' information literacy competence. These include: Project SAILS and the iSkills information literacy tests.

Tips

All methods used to gather data should be tested (*'piloted'*) before they are applied to make sure questions make sense to the respondents and the data gathered helps inform the training.

- **Interviews.** These can be face-to-face or virtual (e.g. by telephone). Interviews can lead to both quantitative and qualitative data. Generally the data are qualitative and provide an insight into people's current situations. For example, people may be asked about their role and the tasks they perform and how information helps them. Barriers can be identified, for example the accessibility of sources, a lack of information competencies etc. One method is to use the *critical incident technique* whereby people are asked to reflect on situations where they needed information, such as needing to get health information to help care for a partner or academic research to write a policy-brief. Once identified, interviewees are asked to explore what led up to the situation, i.e. what created the need; how they sought information, i.e. indicating their information-seeking behaviour and identifying 'helps' and 'hindrances'; and how they applied the information, i.e. helping to understand their needs better and their ability to make use of the information. *Task analysis* is another common interview technique where tasks are associated with roles or a situation, such as sharing information in the workplace. This provides information about current practice and can elicit current obstacles, such as who they should share information with, why and how; how they should store and manage information etc.
- **Focus/discussion groups.** These discussions with small groups of potential trainees or other stakeholders can be informal but must be well facilitated. These can be captured on video, audio recording, flip chart and Post-it notes. This method can be used in a participative fashion where people reflect on their information needs and how they seek and use information. In this case, the facilitator enables the conversation, using various tools such as flip charts or Post-it notes or cause-and-effect diagrams. The latter can be used, for example, to highlight particular problems (their cause and effect) in a community, such as a lack of information security, and then the diagram used to reflect on the kind of information they need to resolve the situation and the capabilities they need to access and use the information.

Focus/discussion groups are also good for discussing and enabling reflection of current practice and attitudes. For example, a team may use this method to reflect on their information practices, for example, how they manage and store their information. This can highlight different practices in the team and help identify good practice and consensus on necessary changes in behaviour and the need for training.

Group sessions are also important post-training to enable reflection on what has been learned. This leads to deeper learning and can also generate ideas for how training can be improved.

- **Observations.** Prior to training, if possible, observation should be conducted in the place where trainees interact with information. This helps the trainer orientate themselves to the trainees and their information environment. Common practices and issues can be identified. This enables the trainer to make sure their training relates to the needs of trainees, in terms of level, and that relevant examples can be used which helps motivate the trainees. It also indicates to the trainees that the trainer is serious about understanding their needs.

Observation during training enables the trainer to identify problems that individuals are experiencing and deal with them quickly and sensitively and also helps to gauge whether the training is pitched at the right level. Evidence can also be rapidly gathered about the skills and knowledge of trainees as they go about undertaking a task or set of tasks.

The significance of self-perception using surveys

Capturing a trainee's perception of their own skills, knowledge or confidence in a particular information literacy skill (e.g. using e-databases) is a useful method for establishing training needs. Also, (see **Stage 1: Assessing needs**) and setting a baseline. However, research shows that people often over-estimate their capabilities⁵. One explanation for this could be a desire to present a certain image of their capabilities. Another could be that people cannot identify what is unknown until they are shown the gaps in their current knowledge, skills and even attitudes. Realising we didn't know something can have a marked effect on our confidence levels and it is not uncommon for training beneficiaries to re-assess their knowledge, skills and attitudes once they have participated in a training intervention.

Using a survey questionnaire to establish the limits of what is known can be a difficult task. Take, for instance, someone who scores themselves three out of five (where one is low and five is high) on a question that asks them to assess their skill in using mind-maps to develop a search strategy. Initially, you might consider their self-assessment score as indicating a reasonable degree of competency. But on its own, this score can be misleading. For instance, it doesn't tell you what the trainee knows about mind-maps or how they use them. It does though provide a measure of their self-assessment – which is valuable when setting a baseline.

In practice you can use a combination of diagnostic test and self-assessment type questions to check trainees understand the concepts, as well as measure their confidence in being able to apply these skills.



5. Dawes, J. (2007). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International Journal of Market Research*, 50 (1)

Case study 3

An institutional approach to assessing information literacy needs in southern Africa

At IDS we have adopted *Outcome Orientation* as an approach to planning, monitoring, evaluation and learning. This focuses on outcomes in terms of the changes in behaviour we would 'expect, like or love to see'. We use it to think about the kinds of changes we are trying to achieve through our activities as well as identifying observable changes in behaviour. Put simply, we design our activities by first asking the question, "What will be different and for whom?" before asking, "What am I going to do?"

We applied this approach in an information literacy needs assessment activity undertaken by IDS and Loughborough University with three southern African higher education institutions, one in Botswana, one in Malawi and one in Zambia. We conducted 27 lengthy, one-on-one interviews with stakeholders at the institutions in Malawi and Zambia, using an interview script to ensure a comparative and consistent approach. As we were unable to do the same in Botswana, we held a participatory workshop there to complement the activities in Malawi and Zambia. This consisted of a three-day planning event with 18 key stakeholder groups. Equivalent representatives in all three institutions were invited to take part in the study and included vice chancellors, faculty directors, and library, technical and administration staff.

The entire assessment proved a reflective and thought-provoking exercise. It enabled key stakeholders to comment on what had already been achieved (i.e. their successes), as well as the challenges (as they saw them) and ways these could be addressed (i.e. the opportunities). It also highlighted where they would like to go, either at an individual, organisational, national, regional or international level.

The discussions resulted in a list of recommendations for activities and partnerships to help all three institutions move forward and address their information literacy capacity building needs. You can read more about this in our paper, '*An institutional strategy for developing information literate, critical-thinking independent learners within higher education in Africa*', available: <http://bit.ly/13kyPmO> ⁶

6. Hepworth, M and Duvigneau, S. (2012). *Building Research Capacity: Enabling Critical Thinking Through Information Literacy in Higher Education in Africa*. Available: <http://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/2301/BuildingResearchCapacityR1.pdf?sequence=1>. Last accessed 23 Feb 2013

Case study 4

Using stakeholder interviews to develop an information literacy national curriculum in Zimbabwe

In a needs analysis activity in Zimbabwe, IDS conducted one-on-one and group interviews with different stakeholder groups interested in developing a national curriculum for teaching information literacy using a learner-centred and enquiry-based approach in Zimbabwean universities. We interviewed key stakeholders at the Research Council of Zimbabwe, Zimbabwe University Library Consortium (ZULC) and the Zimbabwe Library Association (ZimLA) to identify why they wanted to adopt a pedagogical approach. We also interviewed potential recipients of the training to find out their current knowledge, skills and attitudes, as well as those of the people they work with (e.g. the students).

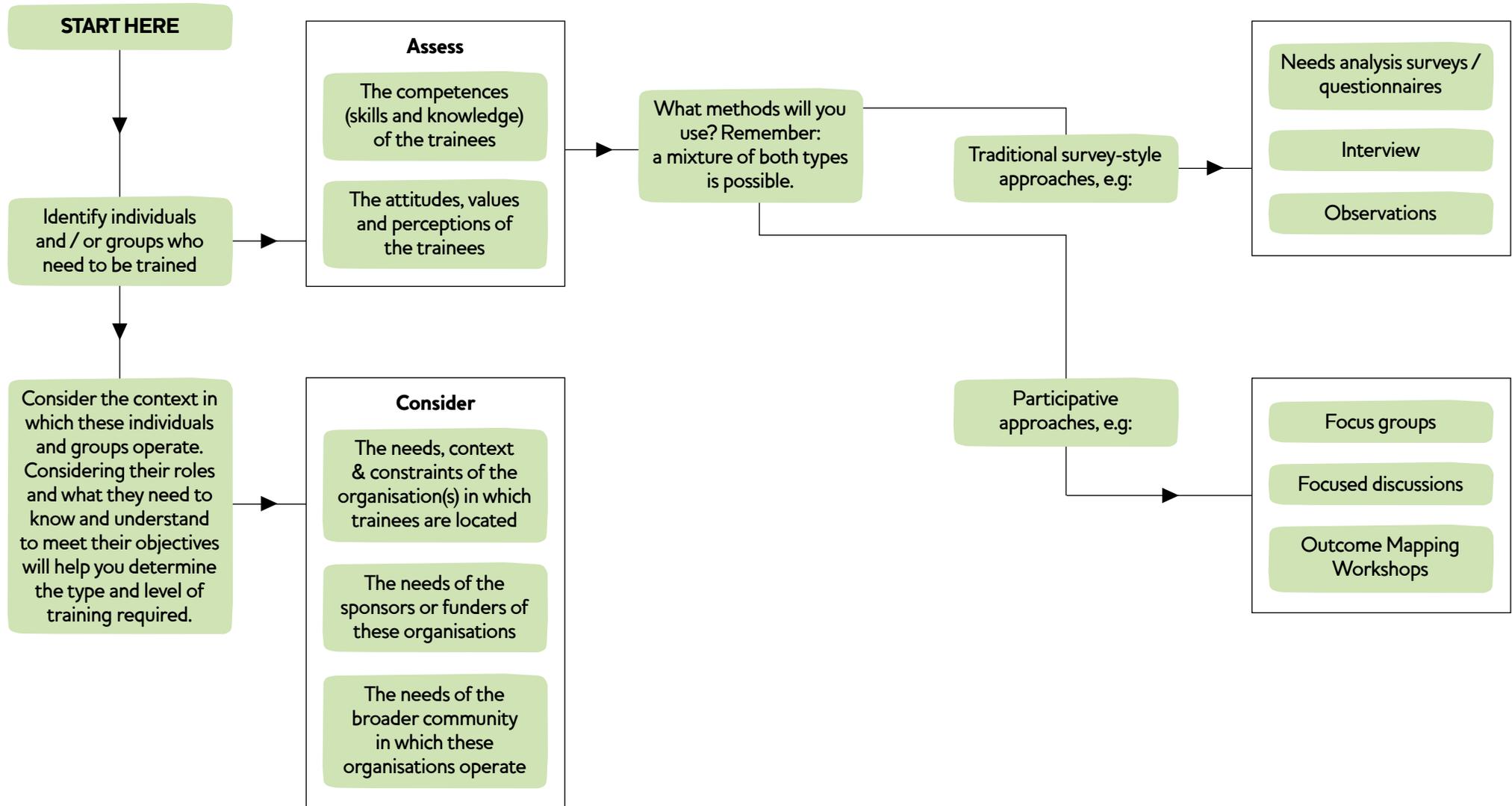
During all of these discussions, we gathered evidence about what had already been achieved and what difference the training might make. In other words, we asked, “What will be different and for whom?” and, “Why is this important in your particular context”? From these discussions, we developed a needs assessment survey which the training cohort was asked to complete. The survey helped to validate the information gathered during the face-to-face discussions and enable us to set the training intervention’s learning objectives and outcomes.

In actual fact, the training outcomes were a combination of the outcomes elicited from the needs assessment activities as well as those identified by the funder of this exercise (DFID). The outcomes were expressed as changes in knowledge, skills and attitudes as a result of taking part in the learning intervention and were grouped as follows: those we would expect to see (normally immediately after the intervention), those we would like to see in the following three months, and those we would love to see (longer-term goals that may or may not happen, their being contingent on other factors).



Assessing needs

Flowchart 1



M&E in action Stage 2: Programme strategy & objectives

? Key questions

Determining your strategy and objectives

- What are you trying to achieve with your training?
- How will you know if it is working?
- What changes will you see if the training has been successful?
- What outcomes are you hoping to observe in knowledge, behaviours and skills?
- Have all the stakeholders contributed to development of the objectives/outcomes?
- Are the objectives/outcomes specific, measurable, achievable, relevant and time-bound?

If you strategically plan your project you will know what you are trying to achieve and have a rational argument for your approach in getting there. Strategic planning is necessary for delivering a good project and also for doing a good evaluation.

Clearly identifying what you are trying to achieve, from your own perspective and that of your audience, is essential. Once this has been defined then a number of techniques can be used to identify the nature of the intervention, specific objectives and outcomes, and ways to identify progress and change.

Pulling it all together

A *framework* in information literacy training M&E is a way of describing your intervention and showing how you expect your actions will lead to the desired outcomes and impact. It is a plan of the methods you will use to gather the monitoring data, but it can also make it easier to define your objectives. Two common M&E frameworks in international development are *Logical Frameworks* and *Theory of Change* (TOC). Both of these can help you to think about and articulate the objectives of your training (as well as its outputs, outcomes and impact). These are generic M&E frameworks and should not be confused with the conceptual frameworks (see Towards information literacy indicators, R Catts & J Lau) for information literacy.

The Logical Framework approach

A Logical Framework (also known as a logframe) is “a tool to help designers of projects think logically about what the project is trying to achieve (purpose), what things the project needs to do to bring that about (outputs) and what needs to be done to produce these outputs (activities).” (Department For International Development)⁷.

Logframes are usually developed in consultation with stakeholders and provide project staff, donors, the project beneficiaries and other stakeholders with a simple summary of a project strategy. A logframe can form the basis of donor-funding applications, when it is used throughout the project’s lifecycle to track progress and adapt to changing situations. In an information literacy

setting, a logframe can be used to articulate how an organisation aims to meet regional or national objectives. For example, an African higher education institution (see **Table 1 : Types of Information Contained in a Logframe**) could use a logframe to articulate how their information literacy programme will contribute to the Africa 2020 (<http://mariemejamme.com/africa/>) goals. Their higher-level goal would be to “invest in human capital and bring about a sustainable future for Africa”. This could be achieved through developing an information literacy programme aimed at students and other related activities. The indicators for measuring whether they had achieved their goal might include an increase in female student academic achievement (as a result of attending the information literacy training programme). The sources of information they would gather would be test data and final end-year results (see table below for more examples).

⁷ BOND. (2003). *Logical Framework Analysis*. Available: <http://www.gdrc.org/ngo/logical-fa.pdf>. Last accessed 23 Feb 2013

Tips

Each donor uses different terminology in their logical frameworks. Familiarise yourself with the variations in terminology before you start to complete your logframe.

A logframe includes a narrative about:

- The broad development impact the project or intervention will contribute to society or individuals (goal)
- The expected benefits/outcomes at the end of the project or intervention (purpose/objective)
- The tangible products and services the project or intervention delivers (also known as immediate objectives or outputs and results)
- The activities that need to be carried out to achieve the immediate objectives (activities)

Each project description will include details of how progress and change will be measured (verifiable indicators), the type of information or methods used to plan and monitor progress, and a record of the factors outside the project management's control that may impact on project feasibility (i.e. assumptions). **Table 1** shows the type of information usually contained within a logframe.

Theory of Change

A logframe is a simple summary of the project strategy that helps you to plan and monitor your project's outputs and outcomes. But how do you demonstrate the long-term goals of your programme or project? Theory of Change (TOC) is another strategic tool that can help you clearly articulate the long-term changes at an organisational, programme and project level.

TOCs are normally articulated in a diagrammatic form although there are endless variations in style, form and content. TOCs show graphically how change happens in relation to a number of themes, the pathways an organisation might take in relation to these themes and a means by which the impact of the pathways and the assumptions made about how change happens can be tested⁸.

When you deliver your information literacy training you should link your training objectives (and outcomes) to the goals, objectives and activities highlighted in your strategic framework. You should also take careful account of the measures you need to provide to demonstrate that you have achieved your project goals. When you design your training intervention you should translate the framework or organisation's strategic goals into the learning and training objectives/outcomes.

8. Ontrac, The newsletter of INTRAC: Theory of Change: What's it all about [downloaded 01 Feb 2013] <http://www.capacity.org/capacity/export/sites/capacity/documents/topic-readings/ONTRAC-51-Theory-of-Change.pdf>

Types of information contained in a Logframe

Table 1

	Project Description	Indicators	Source/Mean of Verification	Risks & Assumptions
	GOAL – Sustainable improvements in society or well-being of people (impact)	How the Goal is to be measured, including quantity, quality, time	How the information is to be collected, when and by whom	
Information literacy example	To develop creative and innovative thinking skills to build a more sustainable Africa workforce	X number (e.g. 20) employers stating that new student recruits have better employment skills	Interviews with employers Surveys of employers	The environment is stable and students can find employment. A demand exists for creative and innovative talent. Employers are willing and able to communicate the changes in creative, innovative thinking student profile
	OBJECTIVE(S) – Changes in behaviour or improvements in access or quality of resources (outcome)	How the Purpose is to be measured including quantity, quality, time. How you will know that intended change has occurred	As above	
Information literacy example	To increase the use of research knowledge by students	X number of current and relevant citations in research papers X increase in the use of e-journal databases	Report with analysis of examples Self evaluation reports Regular interviews conducted with students and staff Surveys of students and staff	e.g. Assess threats and vulnerabilities of a region, outside beneficiaries' control If the Purpose is achieved, the assumptions external factors that need to be in place or must hold true to achieve the Goal The increase in research knowledge and skills will lead to critical and innovative thinking skills.

Types of information contained in a Logframe

Table 1 (continued)

	Project Description	Indicators	Source/Mean of Verification	Risks & Assumptions
	RESULTS – Tangible and immediate products or services as a consequence of completed activities	How the Results are to be measured including quantity, quality, time?	As above	If the Results are achieved, the assumptions that must hold true to achieve the Purpose
Information literacy example	A credit-bearing information literacy programme	X students successfully pass the programme X students achieve x results in their test scores	Test results Assignments	Attitudes to the value of the library will improve along with creative and innovative thinking skills Students are able to see the link between critical lifelong learning and building innovative thinking skills
	ACTIVITIES – Tasks that have to be undertaken to deliver results through mobilising inputs	Input and Resources needed to carry out each task		If Activities are completed, the assumptions that must hold true to deliver the results
Information literacy example	In year 1, information literacy module (on critical thinking skills) is developed	The module is developed in collaboration with academic staff and contextualised to different disciplines		Library and academic staff are able to teach critical thinking skills

Definitions

Box 7

Making your objectives / outcomes SMART

Ask yourself if each of your objectives/outcomes is:

- *Specific* Do you have a clear statement of what the trainers and trainees will do or learn during the training intervention?
- *Measurable* How will change be detected and what are the baselines (if any) against which it will be measured?
- *Achievable* Have you ensured that trainers and trainees have the resources and the capacity to achieve the objective?
- *Relevant* Is the objective relevant to the trainees' role or the role they perform in their organisations?
- *Time-bound* Has the objective been designed with a view to how long the training takes place and the subsequent effects of the training persist?

If your objective can demonstrate each of these attributes, it is SMART. It is not SMART if any one of them is missing.

It is worth bearing in mind that these different attributes are also interdependent. For example, an objective will not be *measurable* if it is not *relevant* to a learner who cannot *achieve* a *specific* skill in the *time* available to them.

The training objectives/outcomes

An **objective** is what you will achieve or learn by the end of a training intervention. Objectives are often linked to the training outcomes, which are expressed as what you will be able to do with the new skills and knowledge. Effective M&E is impossible without the identification of clear objectives that relate to outputs, outcomes and impact (see **Box 5: Outcomes, Outputs and Impact**).

Considerations when setting your objectives (and outcomes)

All training interventions occur within particular contexts – individual, organisational and community or social. The relationship between these contexts is important, and so defining objectives should always be a joint exercise. Trainers, trainees and other stakeholders in the training intervention should all have their needs, interests and concerns considered. For example, the objectives of university-based information literacy training interventions might have to be matched against broader institutional objectives, policies and strategies. Or, the objectives of trainers working for NGOs might have to reflect the priorities of funders or donors, or the ability of the community to advocate for resources. For more on consulting with stakeholders, see **Stage 3: Identifying challenges**.

Your objectives should also be SMART (see **Box 7: SMART Objectives**). A SMART objective for an information literacy training intervention might, for example, be: 'By the end of the training intervention (time-bound and achievable), learners will be able to critique the tools and strategies (specific) they currently use (relevant) to find scholarly information (measurable).'



! Tips

When considering what objectives the training should meet, consider individuals' personal objectives as well as their organisation's objectives. You should also consider the objectives of any other stakeholders, such as funders, and the wider community.

Thinking through outcomes and impact

Outcomes focus on how the skills and knowledge will be applied. Some possible outcomes for information literacy training include:

- **Changes in knowledge and skills.** This is where M&E captures precisely what has been learned through the training intervention: the knowledge, understanding and skills that have been acquired, developed or enhanced. These data should be gathered immediately after your training and we go into more detail about this in Stage 5 of our M&E journey. For example, this could include the ability to use a mind-map to help define information needs and identify search terms.
- **Changes in confidence and behaviour.** M&E here seeks to capture the extent to which trainees' approach to the handling of information has evolved as a result of what they have learned. Our research in the course of developing this toolkit suggests that relatively few

attempts have been made so far to gather evidence on such changes. We discuss how it has been achieved so far, however, in Stage 6 of the M&E journey.

- **Changes in performance and practice.** This is the extent to which trainees are doing things differently as a result of what they have learned. M&E here seeks to answer questions such as how trainees have applied their knowledge, skills and newly-acquired confidence to enable them to work more effectively, whether it be as students, academics, community organisers etc. For example, this could include evidence of using a range of sources shown by relevant references in a report. The answers to such questions can be complex, particularly if the impact can be measured only in the longer term. However, they serve as a basis for considering the broader impact of information literacy training interventions on organisations and wider society. We provide a case study in Stage 5 and which explores the use of using diagnostic tests pre-, during and immediately after training, and three months later.

Some possible impacts for information literacy training include:

- **Impact on an organisation.** Training is likely (although not invariably so) to take place within organisations such as schools, universities or local libraries, or at the behest of organisations such as donors or funders which commission third parties, e.g. NGOs, to undertake the training. These organisations have a right to expect that information literacy training will have an impact by helping them meet their overarching priorities. For

example, this could include acceptance of publications by refereed journals or an increased in the success of bids for funding.

- **Impact on the wider community.** The impact on the wider community of your training intervention may be particularly challenging to identify. The boundaries of your target sector or community may be ill-defined, your timescales for impact long and your SMART objectives/outcomes difficult to define, let alone to measure. Nevertheless, the Centurion workshop demonstrated there was significant interest in deriving community outcomes, and therefore in applying M&E to a broader, societal context.

If you need to evaluate impact on the community, you should consider the context in which your training intervention is taking place. For instance, where a specific organisation is involved in outreach to the wider community, what current training interventions do they provide and are there gaps in provision? One example of outreach to community is what role does a university library play in preparing students for the transition to higher education? Does it work with teachers and students to prepare students for tertiary education and has this led to a larger number of students being accepted?

Revisiting a community where an information literacy intervention has taken place could seek evidence of increased use of information technology and successful advocacy for resources, such as the provision of local health facilities, based on effective use of available information.

Case study 5

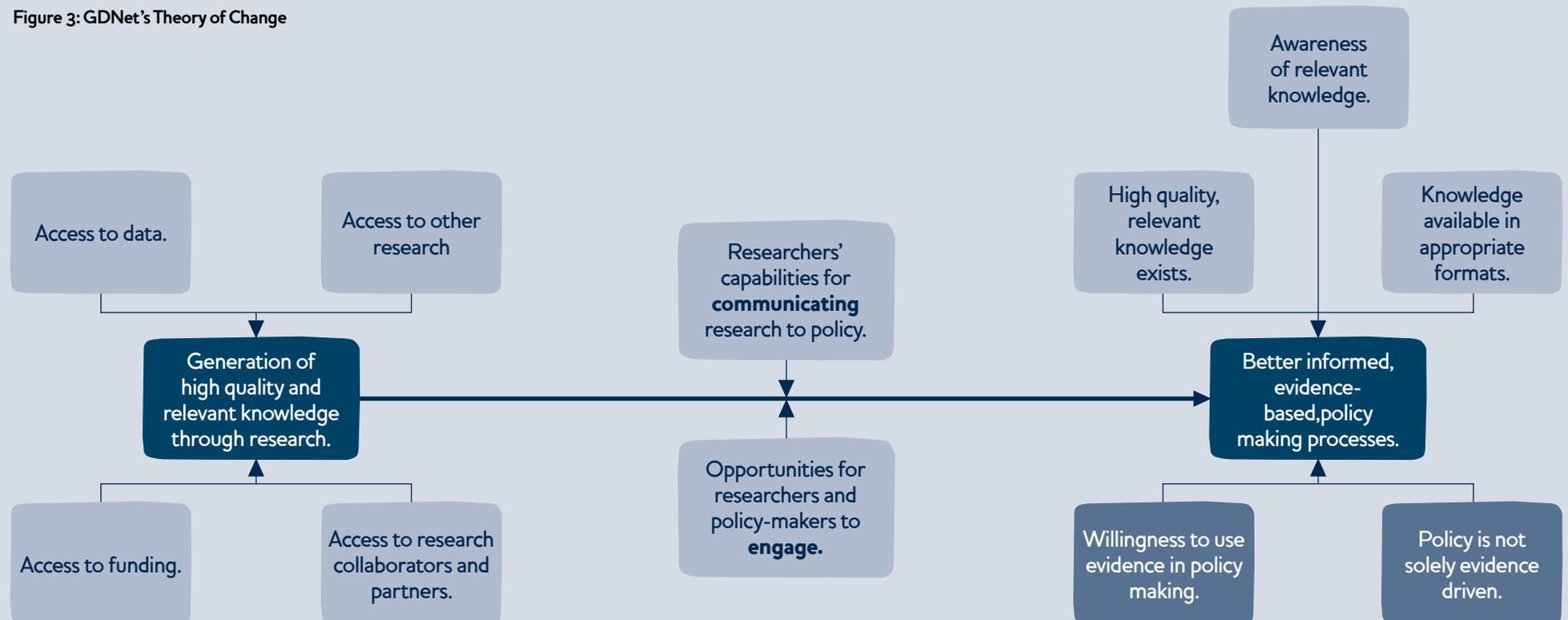
How GDNNet applied Theory of Change

Figure 3 illustrates the Theory of Change developed by the GDNNet, part of the Global Development Network (GDN), in their five year strategy paper (2010-2014)

entitled 'Research Communications from and for the Global South'. Developing a Theory of Change can help you to explore and collect evidence about the pathway which leads from the specifics of what is taught and

learned during a training intervention to what trainees do in practice. The easiest way to 'read' a Theory of Change is from left to right, though they are actually developed from right to left in a workshop setting.

Figure 3: GDNNet's Theory of Change

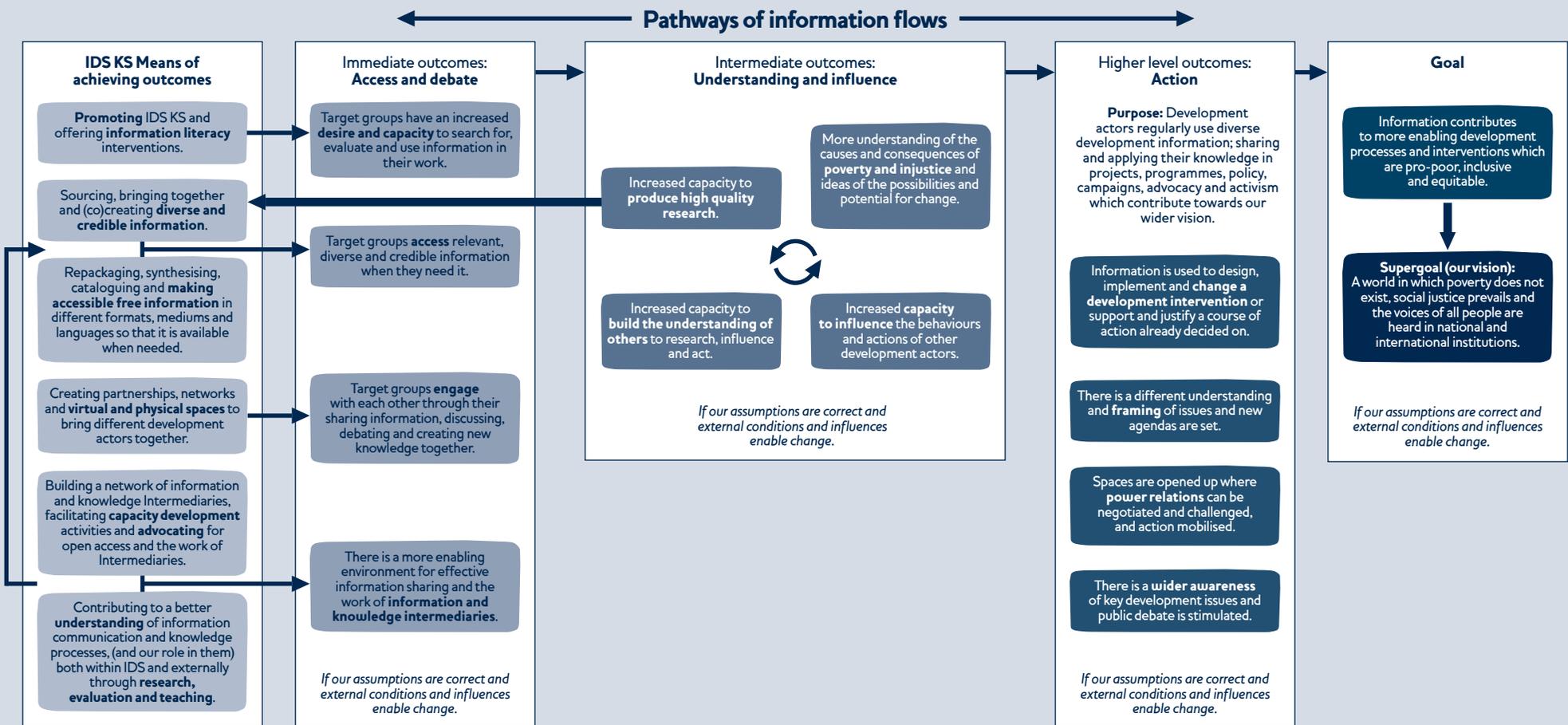


Case study 6

How IDS incorporated feedback loops in its Theory of Change

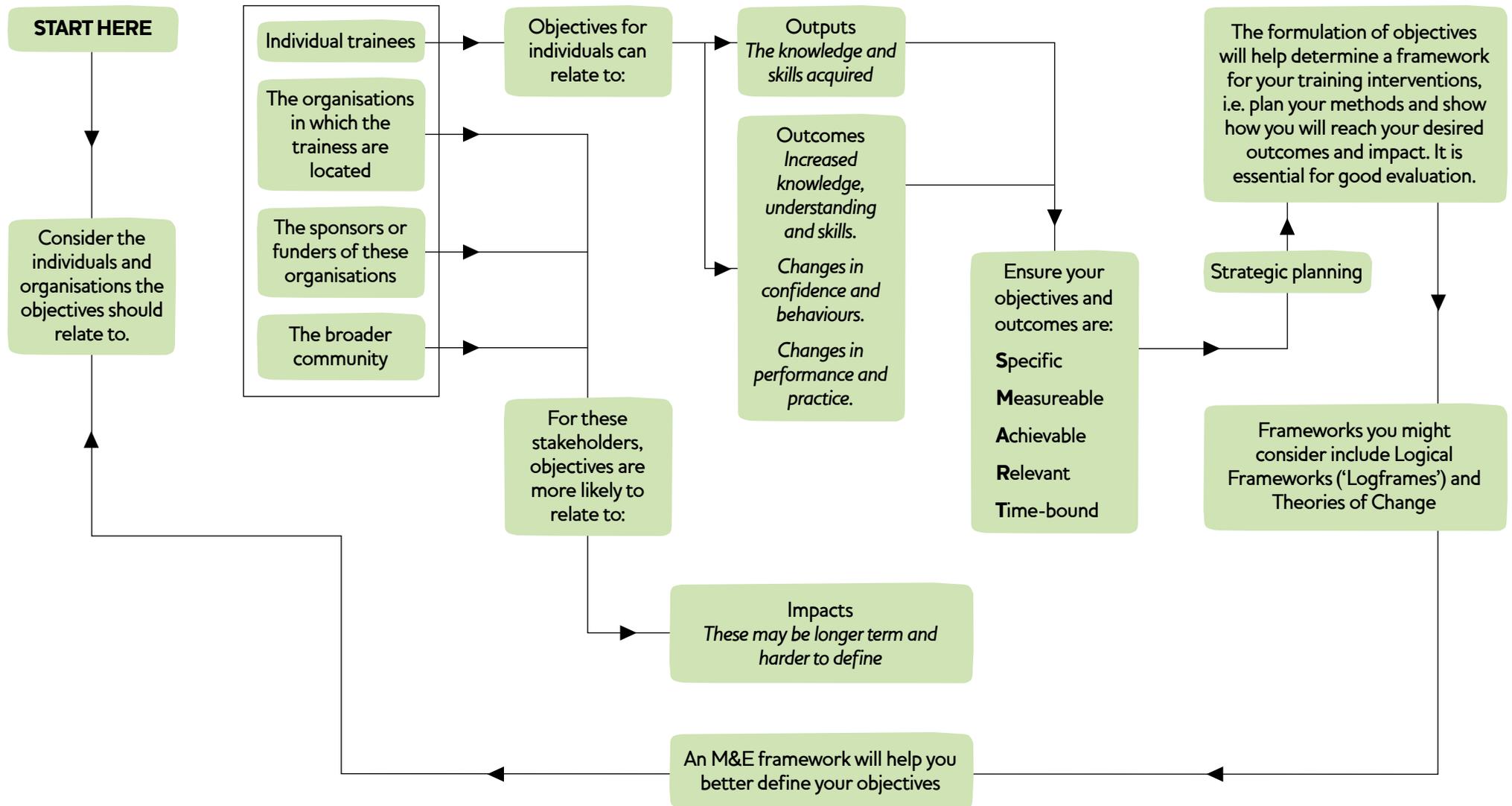
Figure 4 illustrates the Theory of Change IDS created for its Knowledge Services (KS) team. This one is rather more complicated, with some feedback loops embedded.

Figure 4: IDS Knowledge Services Theory of Change (Downie, 2008). http://www.ids.ac.uk/files/From_Access_to_Action_Downie_2008.pdf



Setting objectives

Flowchart 2



M&E in action Stage 3: Identifying challenges

? Key questions

Addressing your M&E challenges

- Who stands to benefit from your training, apart from the trainees? Is there anyone who may be affected *negatively*?
- Who can significantly influence the success of the project?
- What challenges might you encounter during your M&E activities?
- How are you going to minimise the risks of encountering these challenges?
- What risks are there and how can they be managed?

As you embark upon your M&E journey, you need to think about the challenges you may encounter. Challenges come in many forms. Considering them in advance will help you manage them, and plan to minimise the risks they present. Challenges can include people and the physical and emotional environment.

Challenges from people

Very often the most significant challenges to any intervention are rooted in people rather than practicalities. In particular, individuals who stand to gain or lose from your intervention, or who can influence it, i.e. your stakeholders, can determine the success or failure of your M&E journey.

Your stakeholders should have been consulted when you set your objectives (Stage 2 of the M&E journey), but it is also worth considering whether you should collect some data from them, how you should communicate with them and whether they should be involved in learning processes.

Identifying and involving stakeholders in the entire M&E cycle, to at least some degree, brings a number of benefits:

- It ensures they understand and are committed to the M&E process
- It helps ensure the relevant questions are being asked
- It increases the chance that findings and recommendations are listened to and used
- It ensures that participants are willing to provide data and perceive the process as a useful one
- It may help ease the load on the trainer if stakeholders help with data collection and analysis
- It ensures that M&E is embedded in the whole organisation and will continue even if a trainer leaves

For these reasons, it is worth doing a *stakeholder analysis* as one of your earliest activities on your M&E journey. It will help you determine the extent to which you should consult your stakeholders at each stage of the journey.

! Tips

Communicating identified risks to stakeholders early on in your M&E journey flags up potential problems to those who need to be aware of them and may result in help to overcome them.

Challenges in M&E may arise from a variety of others sources too – and at all stages of the M&E cycle. In the table below we have described some challenges you may face in terms of questions, and grouped them into the different stages of the M&E journey at which they might occur.

The solutions to the questions will be highly specific to your own context, but failure to address them early on in your M&E journey may store up problems for later. Consider using a problem-analysis tree to break down the problem into manageable parts. This will help to prioritise various factors, define solutions and agree actions.

Questions for addressing challenges

Table 2

Decisions	
1. Assessing needs	<p>Who defines how wide a lens you should take on needs assessment?</p> <p>Is everyone involved willing to admit to individual and/or organisational needs?</p> <p>Do stakeholders accept the necessity to do a needs assessment, with the consequent resource and time costs?</p>
2. Programme strategy and objectives	<p>Are stakeholders agreed on the programme strategy?</p> <p>Have stakeholders embraced the need for evaluation, with the consequent resource and time costs?</p> <p>Are stakeholders agreed on the purpose of the evaluation and the evaluation questions?</p>
3. Identifying challenges	<p>Have you done a risk assessment for your M&E process, identifying big and small issues which could derail it, and have you developed strategies to address them?</p>
4. Designing M&E	<p>Do stakeholders understand the implications of the choice of your M&E methods, in terms of skills, resources, cost and the kinds of data which will be generated?</p> <p>Have individuals with appropriate skills and time been identified to implement the M&E?</p> <p>Have logistics been considered, including scheduling, transport, data collection and data entry?</p> <p>Are the participants, i.e. the trainees, sufficiently engaged with the exercise? Do all the stakeholders appreciate the value of the training? Do they consider their needs have been adequately considered? Do they see training, including the M&E, as threatening or enabling?</p>
5. Establishing a baseline	<p>Have you built in baseline evaluation?</p> <p>Have you planned your M&E so that you can establish the baseline early, before the intervention has actually started? (Otherwise, your participants may have already improved, and you may not detect any further changes.)</p>

Questions for addressing challenges

Table 2 (continued)

Decisions	
6. M&E during and after training	<p>Have you designed your M&E so that it is only minimally disruptive during the training process?</p> <p>Do all the trainers understand the point of doing M&E and have they committed to it?</p> <p>Have you communicated your M&E process to participants and engaged them in it?</p>
7. Data analysis	<p>Have you piloted your data analysis early so that you can identify any issues, e.g. in terms of skills, knowledge or software?</p>
8. Learning from M&E	<p>Have stakeholders committed to doing something with the M&E results?</p> <p>Have they accepted that the report is just the beginning of their effort?</p>
9. Communicating findings	<p>Have you identified suitable avenues for communication with stakeholders, and allocated time for this?</p>

Challenges from the environment

The physical environment can pose a problem if you intend to gather M&E data through face-to-face interviews or focus groups. One-on-one interviews will need a quiet space for individuals to speak openly. If proximity is an issue you can conduct one-on-one interviews by telephone instead. In focus groups, appropriate space and resources are necessary for people to exchange ideas and discuss aspects of information literacy learning. Don't forget resources for capturing discussions, such as flip-chart paper placed on walls.

The emotional environment also has an impact on the M&E. Participants will need to see the relevance and benefit of the M&E process to help them engage with it and overcome any concerns about the use of the data. It is important that you emphasise that their comments will be anonymised in summary reports and always state how the data will be used (for instance, to demonstrate the training success or to lobby for more resources).

Case study 7

Carrying out a stakeholder analysis

At a planning workshop in Harare, Zimbabwe, the Research Council (Zimbabwe), the Zimbabwe Library Association (ZimLA) and IDS used stakeholder mapping to explore options for integrating pedagogy skills and techniques into curricula and information literacy pedagogy training and teaching models into library and information science (LIS) faculties. The workshop was attended by faculty staff from three higher education institutions and six librarians from public libraries and a secondary school.

Our aim was to understand those individuals, organisations and bodies with a vested interest in our work and we started our stakeholder analysis by first identifying who these were, based on pre-existing relationships or ones we thought we could forge in the work. We asked participants to think as broadly as possible in the early stage of the workshop before asking them to group the stakeholders, using Post-it notes to make things easier.

Workshop participants identified the following groupings: direct recipients of the intervention (e.g. undergraduates), faculty staff, researchers, professional bodies (e.g. International Federation of Library Associations and Institutions (IFLS)) and national institutions (e.g. government).

Next, we prioritised these groupings by project recipients, before transferring our stakeholder groups

to a table, where we used a grid to help us undertake an analysis of the groups. (We could have used a mind-map but we have found that the tabular approach is easier to translate into a report format later on)

On the table, we placed the stakeholders in one column and we set about answering probing questions about them. We wrote the questions on the top row of the table (and on a flip chart). These focused on: the current knowledge, skills and conceptions (including values) of the stakeholder group, the needs (articulated as opportunities) to engage with them, the challenges we might encounter as a consequence of working with them, and how we planned to communicate with them. Our questions included:

- What knowledge, skills and attitudes do students and staff currently possess?
- What institutional factors will need to be addressed to foster information literacy and pedagogical skills?
- Are students involved in research?
- What has already been achieved in building capacity to teach information literacy using pedagogical approaches?
- Who has a vested interest in outcomes?
- What challenges might we face?
- What knowledge, skills and attitudes are needed to take this work forward?

This mapping helped us to:

- Identify what we knew about our stakeholders
- Identify the gaps in our knowledge
- Focus on the best approaches for engaging with stakeholders

The analysis enabled us to pinpoint those stakeholders who could influence the outcome of our work, i.e. those it was critical we considered from the outset. This meant we could plan ways in which we could update them with our progress. It also enabled us to identify those stakeholder groups who were less likely to see the value of our work immediately, so we could plan activities that helped us to build confidence in our approaches.

Finally, the analysis helped us to identify possible risks and think through mitigation strategies. For example, the group discussed how to take forward key activities without funding and also took account of forthcoming events that would provide a suitable platform to talk about the project.

This stakeholder analysis, like others that we carry out, was used during the planning process to understand our target audiences but it also served as a baseline to test our observations and develop high-level project plans, a communication strategy and a risk log.

Stakeholder Analysis from Research Council, ZimLA and IDS Workshop

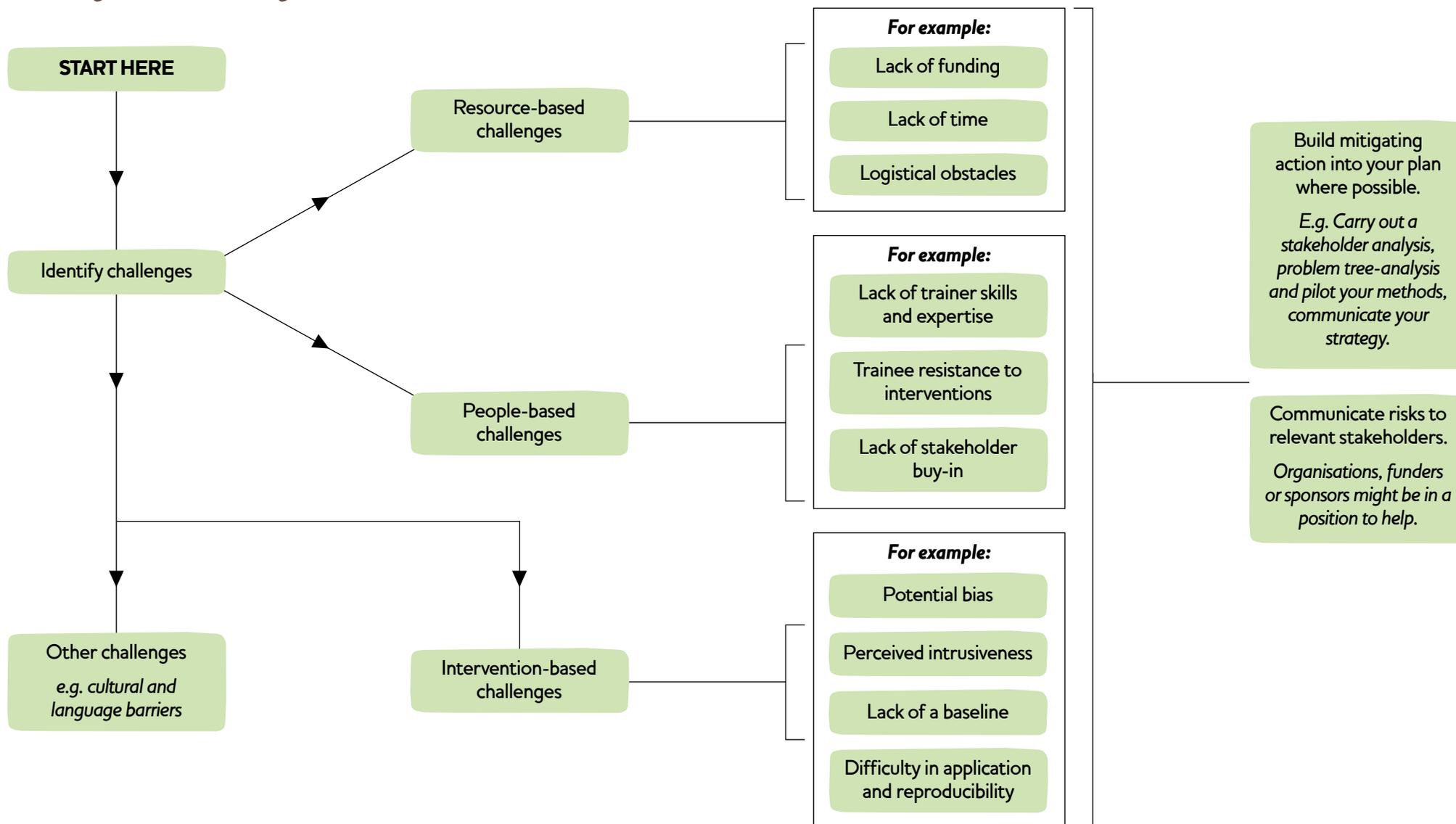
Figure 5

Individual	Skills	Knowledge	Attitude	Challenges
Students: Undergraduate, Post graduate	<ul style="list-style-type: none"> • Mobile technology • Some computer skills • Research skills • Information ethics 	<ul style="list-style-type: none"> • Partial or minimal knowledge of resources • Aware of information resources both print & electronic 	<ul style="list-style-type: none"> • Know how to find digital resources • Learn to pass • Positive learning attitude 	<ul style="list-style-type: none"> • Too rigid and don't like making mistakes • Different ICT skills / appreciation
Staff: Academic, support	<ul style="list-style-type: none"> • Lack IL Skills • Young staff technically able • Technophobia ('old guard') 	<ul style="list-style-type: none"> • Very limited knowledge of IL • Aware of electronic resources 	<ul style="list-style-type: none"> • Low value of IL to high appreciation 	<ul style="list-style-type: none"> • Not involved in IL initiatives • Little resources • Abscond training
Researchers	<ul style="list-style-type: none"> • Limited ICT skills (dependent on exposure) • Information research skills 	<ul style="list-style-type: none"> • Aware of IL • Possess strong information research skills 	<ul style="list-style-type: none"> • Keen to learn • Patient 	<ul style="list-style-type: none"> • Often remotely located
Executive / Management	<ul style="list-style-type: none"> • Limited skills 	<ul style="list-style-type: none"> • Lack of knowledge 	<ul style="list-style-type: none"> • Low interest or appreciation 	<ul style="list-style-type: none"> • Time constraints (for training)
External readers	<ul style="list-style-type: none"> • Limited and variable skills 	<ul style="list-style-type: none"> • Limited knowledge 	<ul style="list-style-type: none"> • Impatient • Low confidence 	<ul style="list-style-type: none"> • Very little access to practical training

Taken from an information literacy (IL) strategic planning workshop in Zimbabwe, 2013.

Challenges in monitoring and evaluation

Flowchart 3



M&E in action Stage 4: Designing M&E

? Key questions

Designing your M&E

- What methods will enable you to establish whether you are achieving your objectives and outcomes?
- What methods are appropriate to use throughout your intervention?
- How will you ensure consistency and comparability between the data gathered?
- What questions do you need to ask and what evidence are you looking for?
- Might you need to use a combination of methods, depending on the range of outcomes you desire?
- Do you have the skills and resources necessary to implement your chosen method(s)?

Once you have defined your objectives (and any outcomes you anticipate) then you are ready to design the detail of your M&E process, sometimes called a *data collection framework*.

The chief function of an M&E data collection framework is to serve as a plan of the methods you will use to gather your monitoring data. There is a range of methods you can use and developing a data collection framework will ensure you capture data that are consistent and comparable throughout your M&E journey. It will also highlight the resources you need to capture and analyse the data.

First though you need to answer some fundamental questions about the evaluation questions you are trying to answer.

Qualitative versus quantitative methods?

The decision as to whether to consider qualitative or quantitative methods is often at the crux of M&E design. It will determine the quality and richness of the information you gather, as well as the depth and breadth of it. We considered the differences between qualitative and quantitative data in some detail in Stage 1 of the M&E journey. You will recall:

Qualitative methods help you to describe, explain and understand a process, or explore a variety of positions.

They are often associated with feelings, thoughts or perceptions, and can reveal responses that add a richer, more compelling dimension to the data collected.

Quantitative methods help you to say how much or how many, and to make comparisons between two groups or test a hypothesis. They are often associated with numerical data or data that can be converted into numerical form.

Consider a field of maize ready for harvesting. Quantitative methods to evaluate the quality of the maize may involve weighing the maize or calculating the average yield per square metre. Qualitative methods may involve a botanical drawing of an ear of maize, a discussion of its colour, flavour and smell, or an examination of the way in which it reacts to the weather. In short, quantitative methods enable us to describe the harvest; qualitative methods help us to understand better what maize is actually like.

In reality, quantitative and qualitative approaches are often used together. This is referred to as *triangulation* or *mixed methods*. Triangulation offers the advantages of both, while minimising the disadvantages of using them singularly (see **Table 3: Qualitative vs Quantitative Methods**). It is important to be clear what questions you are trying to answer with each approach.

Qualitative vs Quantitative methods

Table 3

	Qualitative	Quantitative
Advantages	<p>Exploratory, and permits answers to arise that you hadn't considered the possibility of</p> <p>May feel more respectful (asking people to tell their own stories rather than imposing a story, e.g. via a questionnaire)</p> <p>May feel more participatory for both trainers and participants</p> <p>Provides rich, 'textured' data which can feel more compelling</p>	<p>The only way in which 'how much/how many/how strong' etc. questions can be answered</p> <p>Analysis and interpretation may be easier than with qualitative methods</p> <p>May seem more compelling (but good qualitative methods can be equally compelling)</p> <p>Allows you to track subtle changes, including changes across time</p>
Disadvantages	<p>May be perceived as less robust than quantitative methods (though this can be mitigated by conducting, analysing and reporting the research to the highest standards⁹)</p> <p>May seem deceptively easy to conduct, e.g. interviews. Care must be taken to avoid 'demand characteristics' (i.e. indicating to participants what the 'right' answer is), closed and leading questioning etc</p> <p>It can be easy to neglect consideration of how transcription analysis will be conducted. A good analysis will take approximately 3 times the length of the original data collection session (e.g. a 1-hour interview may take 3-5 hours to analyse)</p>	<p>'Garbage in-garbage out'. Quantitative methods are only as good as the instruments used to collect the data</p> <p>When people or events are represented by numbers, the narrative may be oversimplified</p> <p>Not useful if the samples are small</p> <p>Difficult to tell whether you are actually asking the right questions</p> <p>Participants can be anxious, e.g. about what will happen to data about them</p> <p>May feel more like an exam for participants</p> <p>Heavily dependent on literacy</p>

9. * Spencer, L., Ritchie, J., Lewis, J. and Dillon, L. (2003). *Quality in Qualitative Evaluation: A framework for assessing research evidence*. Available: http://resources.civilservice.gov.uk/wp-content/uploads/2011/09/a_quality_framework_tcm6-7314.pdf. Last accessed 23 Feb 2013

Thoughts and feelings versus behaviour?

Most trainers in information literacy training interventions want, ultimately, to change the behaviour of trainees. However, that can be a very long-term goal. In the short term, we often use a change in trainees' self-assessment of their knowledge, skills and attitudes as an indicator that we may eventually achieve a change in their behaviour.

However, although, it is easier to examine changes in thinking in the short term, we shouldn't forget that small changes in behaviour may be still be detectable. For example, an intervention aimed at increasing the use of research evidence in policy-making processes may seek a rise in the number of policies based on comprehensive and systematic evidence (such as systematic reviews) in the long term. In the short term though, we might look at whether there is a shift in attitude towards using research evidence and understanding the value it can play in formulating policies or making decisions.

Or consider another example in which an intervention is aimed at improving the training skills of information literacy trainers to use more enquiry-based, learner-centred methods rather than teacher-centred approaches. In the short term we may seek evidence of a shift in their perception of value and some use of enquiry-based activities in their information literacy curriculum, but in the long term we might look for evidence that a trainer has developed an information literacy curriculum based on pedagogical approaches, which also incorporates varying assessment techniques.

The advantages and disadvantages of looking at changes in thinking or changes in behaviour are summarised in **Table 4**.

Changes in thinking vs Changes in behaviour

Table 4

	Changes in thinking/feeling	Changes in behaviour
Advantages	<p>Likely to be detectable early on in the lifetime of an intervention</p> <p>Often directly targeted by our interventions</p> <p>Perceived to be easier to investigate than behaviour</p>	<p>May be less conscious and more habitual, and therefore less subject to bias</p> <p>Often felt to be more substantial in terms of an outcome</p> <p>May give us ideas which further shape and focus our intervention</p>
Disadvantages	<p>Possibly no direct causal link between changes in thinking and long-term changes in behaviours</p> <p>Dependent on self-reporting, so data may be distorted by biases in design, e.g. when participants 'know what we want to hear'</p>	<p>May be difficult to define ('operationalise') the behaviours we are looking for as indicators of impact (though this is more a challenge than a disadvantage)</p> <p>Even if we define the behaviour adequately, it may be extremely difficult to observe in real time, and therefore we may have to depend on self-reporting</p>

Oral versus written versus visual data?

Spoken, written and visual approaches to collecting qualitative data are not mutually exclusive and can be combined if required. You might want to consider the options each offers at the outset, bearing in mind that the written word is often prioritised to the exclusion of other modes of communication.

Individual versus group evaluation?

You should consider whether you want to conduct your evaluation with individuals (e.g. using interviews or questionnaires), or with groups (e.g. via consensus workshops or by using tools such as i-clicker). When working with groups, it is also worth considering whether individuals in the group need to work together at the same time or by responding to others' comments and input but not at the same time, e.g. by using a wiki or bulletin board.

M&E design considerations

There are many considerations when choosing your M&E design. The most basic are:

- Will the data collected give you the information you need at the pre-, mid- and immediate post-intervention stages?
- Will the selected methods allow you to elicit evidence demonstrating that you have met your planned objectives and outcomes?
- Do you have the capacity to implement the methods you have found appropriate?

Other considerations include:

Working in order

You need to make your choices of methods, tools and technologies (see **Box 6: Approaches, Methods, Tools and Technologies**) in the right order. Identify the most appropriate method for capturing your monitoring data before choosing your tools or technologies – which should then facilitate the data collection. Taking the time to consider the amount of effort or cost involved in collecting and analysing the data upfront can result in significant savings in the long run. Your choice of technology will also highlight any logistical issues you have to consider when preparing your evaluation.

Ease of comparison

It is critical that you choose methods and tools that are consistent and comparable if you are to elicit results that are robust and meaningful. For example, when you design your pre- intervention survey you should plan to ask the same questions in the post-intervention survey(s) as comparing them can enable you to demonstrate the impact of the intervention as well as highlight changes in knowledge, skills and attitudes. Another useful tip for measuring the quantitative changes in knowledge, skills and attitudes is to measure the *distance travelled*. See **Stage 5: Establishing a baseline** for a description of this useful tool.

Flexibility and inclusivity

Trainees may have a variety of intellectual and physical capacities. You need to define methods which take account of these. For example, individuals who have a hearing impairment may find a focus group stressful, but

may respond well to an individual interview. Incorporating non-verbal and non-literacy based methods where literacy cannot be assumed will help participants feel included and able to respond. Choose methods that will highlight information about gender, current capacities, language preferences and learning needs or disabilities at the pre-intervention stage and monitor throughout the M&E journey.

Resource requirements

As well as the amount of effort required to undertake your M&E data gathering and analyses, you need to consider time and cost implications. For example, methods that allow a number of people to respond at the same time are generally faster in terms of data collection time. However, be careful that economising at this stage doesn't shift the effort to the data analysis stage. This is a classic problem in conducting focus groups, where large amounts of qualitative data can be gathered very quickly, but they are much more time consuming and complicated to transcribe and analyse than data from one-to-one interviews.

Consider too that though data collection technology can be expensive, especially at the set-up stage, it can enormously reduce data collection and analysis time. It is worth asking whether participants already have access to particular technologies, e.g. mobile phones. It may also be possible to request donations or free licences from commercial providers.

However, be aware that while working within your resources, you need to collect sufficient data to subject them to powerful statistical testing when you undertake your data analysis (in Stage 7 of the M&E journey). You should bear this in mind when designing your sample size.

Triangulation

Triangulation is the technical term for applying mixed methods. Essentially, it maps data from one method to data gathered from other data sources, including those captured through a different research method. In information literacy interventions, we can collect data from a variety of information sources, including surveys, tests, assessment rubrics, reflective journals, focus group discussions and individual interviews. If we map data derived from quantitative data sources, e.g. surveys, with data captured using qualitative methods, e.g. individual reflective journals, it can help us to eliminate bias (in our data analysis) and cross-check our observations about patterns of behaviour. The ultimate goal is to increase the validity of our conclusions.

For example, one method you might use at the pre-training stage for an intervention with university students is to conduct one-on-one interviews with faculty staff to gauge perceptions of their students' training needs. You could triangulate this information by inviting the students to complete a pre-training survey, in addition to observing their behaviours during the training itself. Comparing all the data obtained from the survey and observations will enable you to test (and possibly confirm) the assumptions made by the faculty staff.

Triangulation can corroborate or back up your findings and observations. However, on occasion, it can provide contrasting evidence and lead us to divergent conclusions. For instance, if statistical data contained within two post-training surveys contrasted with observations of the training cohort's skills and behaviours. One explanation of this may be that a lack of comparability between the

survey questions in the two survey capture forms led to a misleading and biased analysis.

Triangulation can be particularly important if you want to draw comparisons between different groups. Qualitative methods on their own may give inaccurate data in these situations as the variety across individuals in a group may mask small group differences. Including a quantitative element can overcome this.

Pilot tools

Response bias can creep into both M&E design and data collection stages. Bias built into the design of quantitative tools (e.g. a survey or test) can be detected through careful piloting and pilot analyses. Rephrase any systematic biases and discriminating questions you find to remove bias from the response.

Bias is harder to detect in qualitative research (e.g. interviews) as it can arise through the interaction between the trainer and trainee. To guard against it, carefully consider the design of your interview protocols and select tools that apply good practice in interviewing and facilitation techniques. By referring to the appropriate information literacy standards, models and frameworks (see **Box 3: Information literacy standards, models and frameworks**) you will be able to design your interview protocol on the attributes and competency levels defined in these documents.

It is important also to pilot your methods to check they are understood by trainers and trainees. For example, a dummy run with your questionnaire will ensure that trainees can actually do it. If, for example, all the questionnaires come back with only a few questions

completed it may be that some questions are too long or over complicated. If, on the other hand, people fail to complete just the last page, it may be that you need to insert a simple 'please turn over' on the second last page.

As well as doing a dummy run of your data collection method, it is good practice to do a dummy run of the data entry and analysis you plan to ensure that your data are 'making sense'. You can use the dummy data collected from piloting your methods for this.

Tips

- Be clear about your objectives (and outcomes). The better they are defined, the easier it will be to choose your methods
- Choose methods that are flexible and inclusive
- When examining the cost of a method, look across the entire method pathway, from design to data analysis
- Ensure when choosing triangulation (mixed methods) that you are clear how the different 'stories' will be pulled together
- Wherever possible, pilot your methods first, ideally right through to data entry and data analysis stages

Case study 8

Checking for survey consistency before and after a workshop

We used triangulation to consider the consistency of answers we received *within* a post-event survey we carried out with participants in a Zimbabwe Pedagogy of Trainers Workshop, as well as *between* this survey and one we carried out with participants before the workshop itself.

The workshop was aimed at senior librarians who provide training in information literacy in three institutions and it aimed to build their capacity to deliver information literacy training using enquiry-based, learner-centred approaches. Following the event, we wanted to discover what participants had learned about M&E, so we started our post-workshop survey by asking an open-ended question: “What, if anything, have you learned about M&E as a result of the workshop?”

Sixteen out of 20 respondents emphasised that they had learned that M&E is a continuous process in that it is not enough to carry out assessment merely after a workshop, but that there needs to be a baseline.

We then asked the multiple-choice question: “As a result of the workshop, do you now consider M&E as being:

- “Less important than I considered it previously.”
- “Only as important to me as before.”
- “More important to me as a result of workshop.”

Options ‘a’ and ‘b’ both attracted no respondents, with 100% of participants choosing ‘c’.

Our immediate – and pleasing – conclusion from these questions was that M&E was more important to our participants as a result of the workshop. However, the purpose of triangulation is to spot internal consistency in the answers given throughout a survey (or interviews or focus groups etc). In the above two questions it would have been an internal *inconsistency* if all respondents gave resounding answers to the first question of what they learned about M&E but then claimed, on the second question, not to consider M&E more important as a result of the workshop than before. We concluded then that our responses were indeed consistent.

Our next M&E survey question was also open-ended, asking participants what, on M&E, would they do differently in their own courses as a result of this workshop. Sixteen out of 20 said they would carry out pre-course training assessment/analysis.

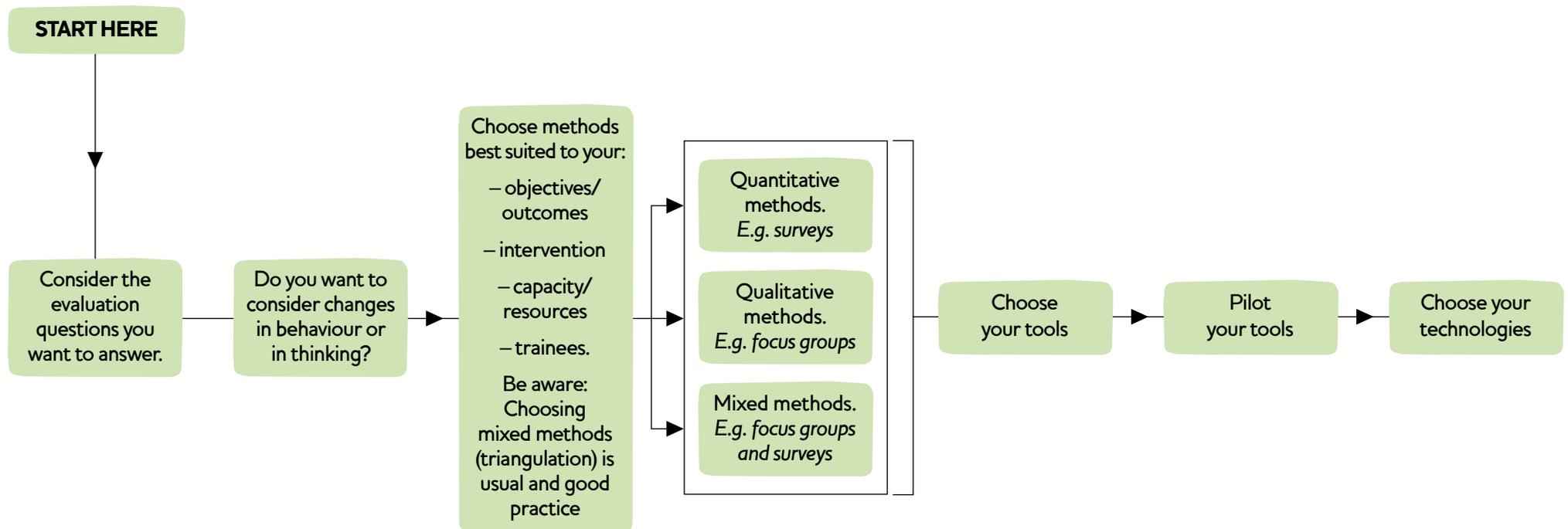
This response too was entirely consistent with our first question. It seemed that the thing participants claimed most to have learned was just the thing they would like to change on their courses. A more general question later in the survey asked participants about the key highlights they took away from the training. Again, there was a huge emphasis on continuous M&E.

But we also wanted to compare responses between pre- and post-workshop surveys, so again we used triangulation. In the pre-workshop survey, we asked: “How do you assess the training needs of the participants on your training courses?” Only 23% of respondents said they always carried out pre-diagnostic tests or assignments (i.e. assessing current levels of knowledge and/or need to establish a baseline).

Given this, any course emphasising the importance of pre-course training should expect a favourable response in a post-workshop survey asking whether participants now consider M&E more important. This is exactly what we got with our response of 100% to the first question in our post-workshop survey. Triangulation helped again to assure us of the consistency of our results.

Design your M&E process

Flowchart 4



M&E in action Stage 5: Establishing a baseline

? Key questions

Establishing a baseline

- What is the current status of trainees' knowledge and skills?
- What are their beliefs and attitudes?
- What do you know about trainees' context now? What are the individual and organisational, goals now?
- What is the current information landscape like?
- What do trainees need to do now?
- What would trainees like to do/know in the future?

To be able to evaluate the difference your training makes, you need to assess the current knowledge and understanding that trainees bring with them. That is, you need to establish a *baseline*.

Setting a baseline is important because it also allows you to make judgments about the content you need to cover in your learning intervention and establish the intervention's learning objectives and outcomes. It gives you the opportunity to test a participant's perception of

their pre-existing capabilities, their attitudes, and their knowledge of concepts that will be introduced on the training course.

Establishing a baseline may involve you assessing individuals¹⁰:

- Skills, knowledge and attitudes
- Confidence levels
- Behaviours

For any mid- and post-training comparisons to be meaningful, you also need to establish the gaps between where trainees are before your training intervention and where they and their organisations would like them to be after it.

Establishing a baseline may also involve an investigation of the policy and practice of the organisations in which the individuals operate, as well as behaviours within the wider community.

You will already have defined your objectives, so it should be clear what you need to evaluate to establish a baseline. However, here are some possible topics you may wish to interrogate:

- Trainees' knowledge of the information landscape, i.e. the information resources available to them, such as paper and electronic sources, as well as people and places that could help them to become informed

- Trainees' ability to define their information needs and use the information landscape, e.g. their knowledge of how information retrieval systems work and how best to use them; and how to use the data, information or knowledge that they gather. (This would include their critical ability, their information-processing ability and their ability to manage the information, such as storing, organising and sharing the information they gather.)
- Trainees' ability to evaluate information resources critically
- Trainees' knowledge of the political and ethical issues surrounding access and use of information

This is not a comprehensive list and the topics you choose will depend on the needs of your trainees, the training agenda and the surrounding context of the trainees. There are several models and frameworks that can help you identify the competencies required in a specific context or discipline (see **Box 3, Information literacy standards, models and frameworks**).

Effectively carried out, such assessments help you build a picture of what trainees currently know, understand and do. This serves not only to establish the baseline against which progress following the training can be charted but also as a basis for the design of their training.

10. Garcia-Quismondo, M. (July, 2010). Evaluation of Information Literacy Programmes in Higher Education: Strategies and Tools. *RUSC*. 7 (2)

Case study 9

Using questionnaires as a diagnostic, to determine distance travelled and to measure progress

The IDS Information Capabilities programme uses a range of methods to gather data about information literacy skills and behaviours. In particular, we use questionnaires to test our assumptions about what is known and what is unknown by using a combination of self-assessment and diagnostic (test) questions. The information literacy questions are based on the competency levels defined in SCONULs 7 pillars.

Our questionnaires are invaluable. The responses allow us to capture evidence of trainees' pre-training capabilities and so set a baseline. We then use this data to measure the distance travelled (i.e. the progress) after the learning intervention has taken place. We also follow up three months after training to establish how the trainees are applying what they have learned in their professional or educational tasks.

In our questionnaires we ask questions that introduce the concepts we plan to use in our training interventions. For example, in our questionnaire before a training intervention about pedagogical approaches we undertook with trainees before a workshop for senior information literacy trainers in Zimbabwe, we wanted to know participants' prior experience or

knowledge of pedagogical approaches. We invited respondents to assess how they would rate their skills (so assessing their self-perception of their skill), whether they could pick the right definition of it (assessing their knowledge) and whether they valued the approach we were taking (assessing their attitude).

We use a variety of question types. In the same pre-assessment training survey, we asked the prospective trainees to rate their skills in facilitation or training using a Lickert scale of one to five. We used this smaller scale rather than, say, a scale of one to 10, because we find it is easier for people to measure their competencies against. We defined the numerical values to remove any ambiguity about the ranking, explaining: "Rate your response from 1 to 5 (where 1 is low and 5 is a high score)."

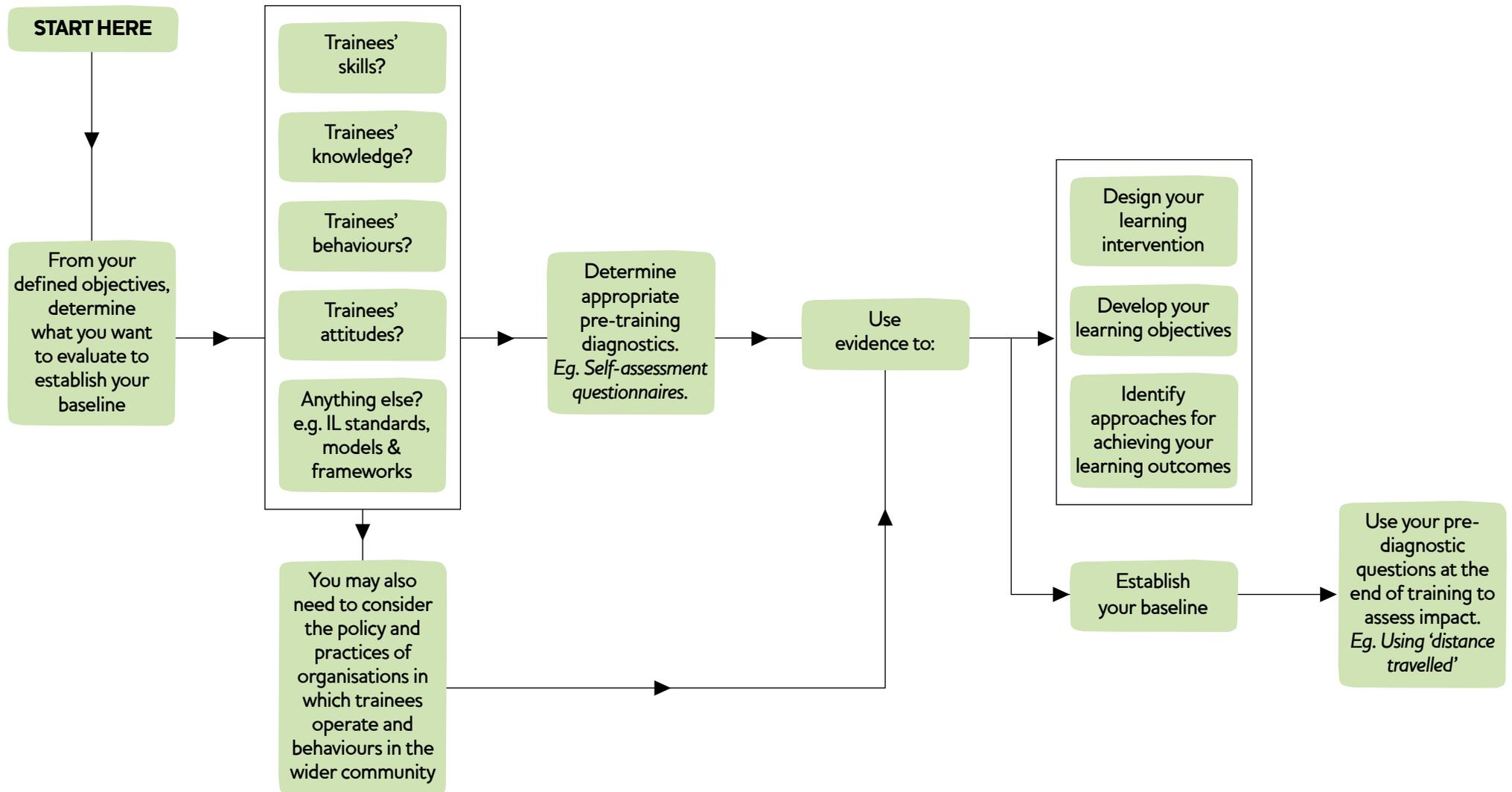
Our other question types in this intervention tested trainees' prior knowledge by asking them to select the right answer from a list of answers, all of which were plausible. For example we provided an example of a training method and asked the respondent to identify whether it was a learner-centred or teacher-centred approach. For example: "At the beginning of each session, Precious asks students to rate their skills in a new topic." This is an example of a learner-centred training approach.

This kind of multiple choice question type also allows us to capture data about trainees' attitudes and behaviours. For example, we used the following question to test how trainees would react in situations where a high-achiever is dominating the training session: "What strategy would you use with the high-achieving participants in a class/seminar/training workshop?" In this question we wanted to see if the trainer favoured more inclusive strategies (e.g. by thanking them for their contribution and inviting others to respond), or would stimulate the high-achiever by providing them with more work, or would reprimand the student and ask them to leave.

We developed our pre-, immediate post- and three-monthly follow-up questionnaires for this intervention at the same time to ensure the data were consistent and comparative. Before using the questionnaire, we verified each question by checking it would give us the outcome we were looking for. We asked ourselves: What kinds of response are we hoping to get from this question? Is the question vague? Is it valid? We reviewed and rewrote questions for which our responses were unclear before piloting the survey questionnaire with a focus group and an M&E expert.

Establishing your baseline

Flowchart 5



M&E in action Stage 6: M&E during (and immediately after) training

? Key questions

M&E During and Post Training

During training:

- Is everyone learning: To what extent do your trainees understand the concepts? Do you need to elaborate further? Can they complete their activity independently or do they need help?
- How do your trainees feel about their learning experience? Do you need to adjust your training style to achieve the learning objectives/outcomes?
- Do trainees feel confident about their new skills and knowledge?
- Do you need to revisit any concepts in the next session?

Post training:

- What is the current level of knowledge and skills of trainees compared with the baseline?
- What is the immediate indication of training impact on the lives of the trainees?

M&E undertaken during information literacy training interventions offers you an immediate means of finding out about trainees' experiences. It falls into one of two categories: assessment FOR learning (*formative assessment*) and assessment OF learning (*summative assessment*).

Definition

Box 7

Types of assessment

Formative assessment occurs while training is being designed, developed and delivered. It includes methods such as pre-training surveys and in-class observations. As a form of assessment, it is regarded as more significant and informative than summative assessment (see below) as it provides both the trainer and the trainee with evidence of the breadth and depth of the learning taking place.

Summative assessment normally takes place at the end of a learning intervention, although it can be undertaken over the course of weeks or months. It focuses on targets, progress and impact, and allows judgments to be made about the extent to which the learning intervention's objectives have been achieved. As such, it aims to set out what the trainee can actually do, focusing on the final result or outcome. As a form of assessment, this type of data is usually of interest to funders, institutional and departmental managers.

The methods you use may be quantitative or qualitative, and may range from questioning to quizzes to hands-on activities. You need to understand the differences between formative and summative methods and when to apply them if they are to improve the quality of your trainees' learning (See **Box 7: Types of Assessment**).

You should also note that there may be some overlap between M&E undertaken towards the end of training interventions and that which takes place soon afterwards.

Assessing progress during training

Formative assessment – or assessment carried out during a learning intervention – brings with it many benefits. It can:

- Inform you of the extent to which your trainees have grasped new concepts, skills or attitudes
- Highlight what is not clear and what needs further elaboration, providing you with evidence about how your learning intervention should be immediately adjusted
- Offer trainees an adaptable trainer who responds to feedback and confirms their achievements ...
- ... so enabling them to learn to recognise what they themselves need to do to improve, thus promoting critical and independent ownership of their development

Below are some formative assessment methods you might want to consider, though the list is not exhaustive. A good trainer will use a range of methods and tools to assess the progress trainees are making:

Focused conversations or a private diary/reflective journal cover Objective, Reflective, Interpretive and Decisional information (also known as ORID). It is a useful structured, debriefing process for trainers and trainees based on the Kolb¹¹ experiential learning cycle. Its purpose is to enable participants to objectively observe, reflect on an event or experience, interpret the experience and make decisions about how this will change their practice or behaviours in the future. It is a flexible process that can be used in groups and/or as a framework for building confidence.

Tips

The reflective nature of ORID and focused conversations may seem awkward or be uncomfortable for some trainees. Overcome this by modelling the process first.

Trainer's tip: *“ORID, or focused conversations, are useful for documenting or establishing which bits of your training need tweaking. Ideally, as a facilitator, you should be well practised in this method if you intend to use it. I'd recommend reading *The Art of Focused Conversation: 100 ways to access group wisdom in the workplace* by R. Brian Stanfield, and *The Art of Focused Conversations for Schools: Over 100 ways to guide clear thinking and promote learning* by Jo Nelson. If you don't fully know what you're doing it can be difficult to keep an ORID conversation on track.”* Orla Cronin, Orla Cronin Research

Mood Monitors (or mood boards) are excellent visual tools for capturing instant and anonymous feedback on training. They are an effective way of gathering evidence on points that need further elaboration or clarification as well as gauging how trainees feel. You should explain how to use your mood monitor at the beginning of a training intervention and encourage participants to post comments throughout it, as well as to conclude the day or session with an overall comment. You can use comments posted at the end of the day or session to highlight areas that need revisiting and make immediate, essential changes to the programme. Mood monitors can be used

in conjunction with the ORID focused discussion by asking participants to write their response on sticky notes and post them on the smiley face (for high points), and sad face (for low points).

Tips

Before you begin your training, identify a space where participants can 'park' comments anonymously. A single flip-chart sheet is all that is required. It could comprise four sections:

- A smiley face to indicate 'I feel happy about ...'
- A sad face for 'I am not happy about ...'
- A question-mark for points requiring clarification or further elaboration
- An exclamation mark for requests for more information

Don't forget to supply Post-it notes and pens close by.

11. Book reference: Stanfield, R.B. (2000). *The Art of Focused Conversation*. Toronto: News Society Publishers

Quizzes/Questionnaires are a quick method of assessing your trainees' ability to grasp new concepts and of identifying gaps in their knowledge. Examples include the use of coloured cards, thumb signals and instant-response devices such as i-clicker and understoodit¹². However, you should consider the question and answer format carefully. To be most effective ask questions that probe comprehension of the learning concepts. Also, ensure that all multiple-choice responses offered are plausible.

Trainer's tip: *"A really good method for formative assessment during training is the use of i-clickers. You can use these to set up questions covering anything you want to evaluate, from skills to attitudes. Participants answer the questions using the clicker and the results are displayed instantly, which helps you, the trainer, decide what to do next."*

I've found that with careful consideration of the type and structure of questions asked, the i-clicker method serves as a useful recap of trained issues, allowing me to decide whether to move the training on or not. The downside of the method is it's costly because you need electricity and batteries – and, of course, to buy the clickers themselves."
Blessing Chataira, ITOCA

Demonstrations/Presentations Asking your trainees to summarise or demonstrate key learning concepts in a two-minute presentation will help you identify any gaps in knowledge or skills that need to be addressed or revisited. This approach is flexible and has the additional benefit of encouraging greater participation in the intervention. Encouraging trainees to express their perspectives and articulate concepts in their own words will promote deeper learning and improve their ability to recall the facts for longer.

Tips

If you plan to ask trainees to give demonstrations or presentations, introduce this approach at the beginning of your training intervention. This sets the expectation that they will be sharing their views.

Trainer's tip: *"When I train staff, one of the first things I do is ask them whether they'd be willing to share their views and understanding of the subject we're going to cover, and if they are we make this part of the ground rules for the training. This means that later I can ask individuals to summarise, in two minutes, the issues that have been discussed. That's a good way for me to establish levels of understanding – which I can then use to guide my pace, as well as to identify any gaps in learning that I need to go on and address."* Babakisi Fidzani, University of Botswana

Assessment rubrics can guide your observations and serve as a method of standardising feedback to your trainees. A simple rubric would measure your trainees' ability to demonstrate the competencies set out in the learning objectives, rating it from one to five, where one is low and five is high. You could also use this information formally, in a summative assessment, as a record of what went well and what needs improvement.

Probing questions For this, you should familiarise yourself with different questioning techniques and understand how to elicit information effectively. The type

of questions that promote an informative exchange are open (probing) questions. These ask the respondent to provide reflective and detailed answers and offer another strategy for finding out more information and checking trainees' understanding of the learning concepts. For probing questions to be effective, you also need active listening skills.

Trainer's tip: *"Simple questions and answers are a useful, low-skill method to assess learners' levels of understanding and ensure their performance will be improved after the session."* Daniel Mangale, ABC Project Kenya

Tips

When monitoring the progress of an activity, link your observations to the learning objectives. If you are walking around observing, capture your observations on a record sheet using a simple rating scale from one to five (e.g. one equals 'needs assistance' to five equals 'working independently').

Trainer's tip: *"Asking students about the learning that has just taken place at various stages throughout the learning process itself guides me on whether or not I need to repeat part of the topics taught. It's a simple, easy-to-use technique, though if you use it you should always remember to align the recap questions to your learning objectives."*
Peter Gatiti, Agan Khan University

12. www.understoodit.com (see Glossary: Live polling)

Tips

Ask What? Why? How? and Describe questions. This minimises the possibility of your receiving a simple yes/no answer. Remember to give the trainee plenty of time to respond before probing their responses, decisions or opinions further. If necessary, give them thinking time before asking them to respond to your question.

Practicals/Group Activities A short practical or activity is an excellent way in which you can assess knowledge and skill levels. Monitoring and recording the progress observed will help you identify and prioritise those needing assistance as well as track group or individual performance. In larger groups, you can ask participants to make peer assessments using an assessment rubric. Feedback given during the training is formative, though if the assessment is recorded the information can feed into summative assessments at the end of the intervention.

Trainer's tip: *“I like to give participants a topic to discuss, brainstorm or present. This kind of group work gives me collective input from the group as a whole and helps me to assess whether or not participants are grasping the concepts we've been discussing. I can then decide whether to re-emphasise certain points or go on to the next item.*

You need though, with group work, to first consider the personalities of all the learners in a group. Some people, introverts, don't like speaking and this can sometimes

prove a barrier if you want to use this method for assessing impact.” Thomas Bello, University of Malawi

Trainer's tip: *“When I use quick-practice activities with my students to recap what's been learned, I always go around the room to see how the activity is being carried out. There's often at least one student who finds him or herself lost and doesn't understand what to do, so being confident enough to monitor the activity is very important.*

You also need to ensure you allow sufficient time for the activity and you have the resources you need – for example, you may need a computer lab if you're asking students to search an online database. Despite these challenges, it's a useful technique to assess understanding levels, particularly for skills-based training.” Boipuso Mologanyi, University of Botswana

Assessing progress at the end of training (Post-training Assessments)

Summative assessment – or assessment at the end of a training intervention – can:

- Assist in validating the efforts invested in a training intervention
- Meet any demands for accountability
- Demonstrate value for money (in terms of efficiency and effectiveness in the case of funders)
- Help trainees practise work or job-related activities in a safe and supportive learning environment

Summative assessments usually include practical, written or multiple-choice tests and assignments. You need to be familiar with a range of summative assessment methods and tools and think creatively if you are to transform this assessments process from the predictable to the inspirational.

Examples include:

- Case-study assignments (rather than written assignments)
- Reflective journals
- Role-playing or hypothetical exercises
- Portfolios of evidence
- Diagnostic tests e.g. Project SAILS or your own instrument

Summative assessment needs to clearly relate to the objectives of your training intervention by being able to demonstrate whether these objectives (whether individual, organisational or community-led) have been achieved. Assessment needs to be individual, fair, challenging and supportive. Although this is a tough challenge for busy trainers, you can use assessment rubrics and feedback sheets as a way of providing comparative and consistent feedback.

Normally, after your training intervention is finished you will re-test or survey your trainees to assess the changes in competency (knowledge, skills, attitudes and values) in addition to measuring the success of the training intervention. Use the same questions from your pre-training diagnostic or survey to assist with the

comparability of results and draw conclusions about the impact of the training intervention.

Post-training assessments usually take place immediately after or within one week of the training intervention ending. If you ask your trainees to complete a post-training assessment after a week you risk the chance that your trainees may forget to include all the benefits accrued during the training.

Reflective journals Reflective journals can be structured as in ORID (see above) but may also be flexible in format. They may contain a collection of thoughts, observations and decisions built up over a period of time, and include images, mind-maps and diagrams as a way of recording facts, opinions and emerging perspectives on a specific topic. You can also use reflective journals to stimulate discussions and capture changes in attitude over time.

Trainer's logs As a trainer, you may also find it useful to build a reflective journal (see above) to reflect on your training experience and capture notes on how the training intervention can be improved or refined.

Trainer's tip: *“By keeping your own trainer's log you can easily analyse information later for review purposes and go on to fill in the skills and confidence gaps in your trainees that you pinpoint. To keep a log you do, though, have to have very good awareness levels of doing the training itself, as well as writing. You also need to know before you start how to keep a log and how the information will be used so that you're recording the right information. It's worth remembering that such logs can also help to pinpoint your own skills gaps.”* Julia Paris, University of Johannesburg

Case study 10

A flexible approach to formative assessment

Participants from 11 organisations working across sub-Saharan Africa who work specifically with policy makers and influencers were invited to attend an International Network for the Availability of Scientific Publications (INASP) and IDS training workshop to build their pedagogical skills. In a session on the principles of constructivism and how this teaching and learning theory is applied to information literacy training, we used a range of formative assessment techniques to check whether participants understood the key concepts. These included a daily mood monitor, thumbs-up and thumbs-down signals, role play and questioning techniques.

However, although some of these techniques were planned and written into the lesson plan, we also introduced formative assessment methods in response to observations of the trainees' behaviours. For example, if the trainees looked confused or

unsure about something we said, we asked them probing questions to understand/diagnose their misunderstanding.

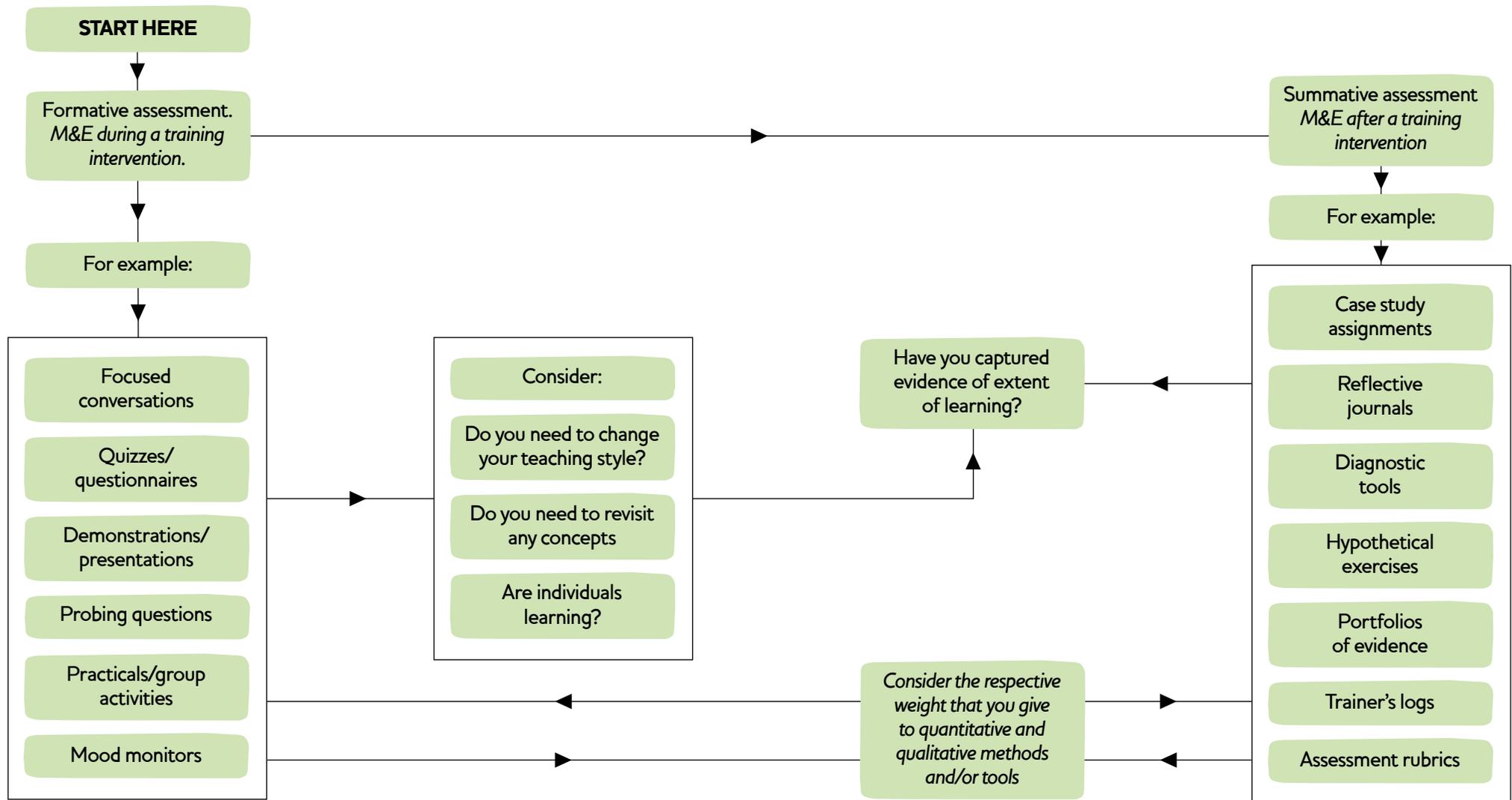
In this way, together we explored the gap in their understanding by questioning the concepts and drawing links to their own working experience(s).

“Role-playing can feel embarrassing and seem silly but if you explain the method clearly, and offer people a safe space in which to do it, it can be a good energiser for a group, for example after a lunch break. A useful role play I've used is to ask one trainee to pretend to be 'Google', another 'Google Scholar, another 'my friend' etc. and then ask other trainees in the group to pose questions to each of them. The answers returned should demonstrate the assumptions, limitations and type of answer each information source would give. As the trainer, you can then identify where the role-playing proved difficult or the answers given were inaccurate.”

John Stephen Agbenyo, Savana Signatures

M&E during and immediately after training

Flowchart 6



M&E in action Stage 7: Data analysis

? Key questions

Analysing your data

- Have you piloted data entry and analysis before embarking on data gathering?
- Have you ensured your sample size is appropriate for your intended analysis?
- Who will be responsible for data entry?
- Will the same person or people be responsible for the data analysis?
- Have you checked and re-checked that your data is entered correctly?
- Have you measures in place to ensure you are transparent in your analysis of qualitative data?

Data analysis, broadly speaking, involves the detailed breakdown and examination of numbers and text. (For convenience we can include other forms of non-numeric data, e.g. photographs, under the 'text' banner.) You should by now have plenty of M&E data gathered before, during and immediately after your information literacy intervention and be ready for this analysis.

Your data is likely to be in a wealth of different forms. For example, it may be in written statements, in video testimonials and diaries, or in responses to survey questionnaires and tests. Organising and managing this data can be very time consuming and labour intensive. This is one reason why you need to have properly piloted your

data gathering, data entry and data analysis early on (See **Stage 4: Designing M&E**). Mistakes can be costly.

Data entry can be a simple matter of typing responses from a questionnaire into a spreadsheet program such as Microsoft Excel. Alternatively, it may be a more time-consuming process of transcribing recorded interviews or written diaries. Do devote some time to checking your data to ensure they have been accurately entered. Again, this could avoid costly mistakes which only become evident further down the line.

You can check your quantitative data by using basic tools in your spreadsheet program to ensure there are no 'illegal' entries (i.e. data transferred inaccurately from the original data source). This is called data cleaning. You can also take 10% of the data and cross-check it, re-entering it where you find substantial errors. (In commercial research, this is called 'double entering' and is done routinely as a way of minimising errors.)

Similarly, for qualitative data listen once more to 10% of your recorded interviews and check the accuracy of your transcription. Judging the consistency, authority and credibility of results are other ways of evaluating qualitative data.

Once you have checked your data, you are ready for your data analysis. This should be conducted in the light of your original questions. The more carefully you have articulated what you are trying to evaluate, the easier your analysis will be. As so often in the M&E of your information literacy training intervention, success will come down to how well you defined your objectives (see **Stage 2: Programme strategy and objectives**).

Using statistics for quantitative data analysis

Quantitative data can be subjected to *descriptive statistics* and/or *inferential statistics*. Descriptive statistics provide simple summaries of large amounts of information. They tend to quantify the extent of a phenomenon, for example how many people used a particular information source. They may include the use of statistical tools, such as frequency tables, cross tabulations ('crosstabs') and measures of central tendency, e.g. means. Descriptive statistics can be informative and give you a sense of the direction as to where your findings are going. Sometimes, though, the sample size isn't big enough. To make the strongest claims, you may wish to consider using inferential statistics.

Inferential statistics enable you to make judgments about the patterns you detect. Are they just a consequence of random variation or are they *significant*? The term significant in this context means more than 'important'. It means the likelihood (*probability*, in statistical terms) that the observed relationship (e.g. between variables) or difference (e.g. between means) in a sample did not occur by pure chance. The lower this probability (which we call the *p value*), the more likely it is that we have found a real difference. The reason we need to apply significance testing is that it can uncover easy-to-make but wrong conclusions. For example, we may observe a pattern of improvement over time in trainees but significance testing may reveal this pattern is actually due to just one person being particularly enthusiastic.

To be able to conduct inferential statistics, the sample size (the number of people who responded to e.g. your survey) needs to be large enough to be able to detect true differences. The minimum sample size can be calculated in advance by a statistician (or you can do a power calculation yourself). Generally, running inferential statistics on a sample smaller than 30 is unlikely to yield any definite conclusions.

The simplest form of significance testing is the *t*-test (see **Box 9: The T-Test**). This is suitable for checking whether two groups (e.g. a trained and an untrained group) are significantly different. It can also be used for doing before and after comparisons, for example, to see how much a group improved from their starting point by comparing their scores at baseline and post-training.

More complex questions require more complex statistics. For example, if you want to examine the relationship between the amount of time spent in class and test scores, you could test whether a *correlation* exists between amount of time and test scores. If you are conducting an exploratory analysis to examine whether any particular features of your intervention predict success, you could conduct a *factor analysis*.

It is unlikely you will need specialised statistical software (e.g. SPSS) for any of this. Microsoft Excel offers a number of powerful data analysis tools. However, you may need

to download and install the free Data Analysis Toolpak for Excel if you plan to run inferential statistical analyses. Bear in mind though, you can still do very valuable work on your M&E with descriptive statistics. You just need to be cautious about your conclusions.

Finding patterns for qualitative data analysis

Qualitative data analysis is a rigorous, often-time consuming activity, whereby the researcher determines whether there are patterns in the data. To facilitate this, verbal data is generally transcribed verbatim (or, at the very least, summarised with detailed notes) and subjected to a *systematic analysis*. While conducting the analysis, qualitative researchers consciously 'bracket' their views and do not let them impose on the data. This is difficult. However, researchers are usually advised to document the process and make notes about the decisions they take.

Systematic analysis generally involves coding the data. This can be done using pre-defined frameworks, such as UNESCO's information literacy indicators (*a deductive approach*) or gradually identifying patterns and evolving codes as appropriate from the data (*an inductive approach*). This is done repeatedly until all elements are coded. In some cases coding is checked using a collaborator.

Furthermore qualitative researchers sometimes take their findings back to the participants to see whether the analysis is 'authentic' and credible. Qualitative data tends to uncover reasons why certain things occur and is particularly good for investigating people's perceptions of a particular situation.

Qualitative data analysis can be done with nothing more than a pen and paper. However, it is well worth using qualitative data analysis software. This does not do the analysis for you (no more than Microsoft Word writes a report for you), but it does provide a convenient way of 'tagging', sorting and retrieving text. Some researchers compromise by importing their text into a spreadsheet program such as Excel (usually one paragraph per cell) and then 'coding' this data by using the next column to categorise comments by theme. It is even possible to take a similar approach using the Table function in Word.

Though there are a wide variety of qualitative data analysis approaches, e.g. conversation analysis, content analysis, discourse analysis, narrative analysis etc, the most straightforward, and most common, is *thematic analysis*. Thematic analysis emphasises pinpointing, examining and recording patterns within data. See **Box 8: Carrying Out Thematic Analysis**.

Guidance

Box 8

Carrying out thematic analysis

The following is a description of the steps taken to undertake a deductive approach. However, it should be noted that a combination of techniques can be applied. Themes may be applied to the text. But within themes new themes may be identified that were not predicted.

- Establish the themes you are interested in. This will be a combination of your original evaluation questions, plus unexpected themes that emerge from reading through your transcripts.
- Create a code book. This is a list of the themes, with their definitions. It will help you remember your own logic when you come to writing your report, and also help if the analysis is being conducted by more than one person.
- Apply the codes to the text. You can do this either by highlighting and annotating manually, or by selecting text and attaching a code if using qualitative data analysis software.
- Gather all text relating to a particular code. You can sort a Word or spreadsheet table, but if you are highlighting on paper you will need to do some rewriting/typing.
- Summarise the text. Pay particular attention to contradictions and the variety of positions.
- Revise your summary. Do this until you feel you have captured the meaning of the responses in a way that enables you to communicate it swiftly in your report.

Whether you use qualitative or quantitative data or a combination to present your M&E findings is likely to be influenced by the stakeholders. Despite organisations and funders showing an increased interest and acceptance of qualitative data and emphasis on process, changes in attitude and relationships etc. they may still have a preference for quantitative data. As information literacy is a competency-based generic skill it is important that your evaluation assesses the skills and knowledge (quantitative) acquired through the programme as well as improvements to attitudes and values (qualitative). These changes should be captured at the individual and organisational levels and incorporated into an evaluation of results¹³.

13. Evaluation of Information literacy programmes in higher education: strategies and tools, M Garcia-Quismondo, July 2010

Case study 11

Using distance travelled

At IDS we use the distance travelled technique to assess the progress made in achieving our desired training outcomes. We used it, for example, in a pedagogy of senior information literacy trainers workshop held with participants who work in universities in Zimbabwe.

Table 5 shows some of the key attributes covered in this training intervention. The three columns represent two different surveys: the first, the pre-training course survey (Column A); the second and third are two questions posed in the immediate post-course survey (Columns B and C) in which participants scored their skills prior to training retrospectively (Column B); and in the third, the participants scored their new skills after receiving the training (Column C). Note, all three surveys measured the same attributes and, for each survey, these were scored using the same five-point scale in which one was the lowest level of attainment and five the highest.

Skills self-assessment scores from three surveys and their averages

Table 5

	Column A	Column B	Column C
	Pre-training needs survey (1)	Immediate post-training survey (2)	Immediate post-training survey (2)
Attribute		Retrospective prior knowledge assessment	New competencies
Using mind-maps to develop search strategies	3.15	2.35	4
Using internet search engines to look for information (e.g. Google, Google Scholar)	4.76	4.37	4.7
Writing Boolean search phrases using concept tables	3.45	3.15	4.25
Evaluating search results	4.15	4	4.7
Narrowing/filtering search results	4.2	3.85	4.6
Using electronic library resources to find information	4.81	4.35	4.8
Explaining to someone else copyright and licensing laws of online journals	3.9	3.5	4.25
Promoting use of e-resources in my organisation	4.62	3.8	4.8
Promoting use of e-resources in other organisations	3.3	3	4.35
Lecturing	4.14	3.05	4.1
Facilitating	4.05	2.55	4.2
Training	4.15	2.9	4.37
Averages	4.06	3.41	4.43

When you analyse the results you can notice the difference between the lowest average scores in column one (pre-training) and column two (re-assessment of prior knowledge). The participants lowest average score was 4.05 (81%) prior to training but dropped to 3.4 out of five (68%) after the training. Given that both of these scores were asking for the participants' skills scores before training had taken place, what explains this disparity? The data demonstrates two explanations that we first came across in **Stage 1: Assessing your trainees' needs:**

- **Known/unknowns:** after training participants begin to realise how little they knew before training. Therefore, when asked to score themselves retrospectively, they score themselves lower.
- The two questions (i.e. immediate retrospective re-assessment of skills prior to training and the assessment of new skills) are asked in tandem: given that participants are being asked to score themselves before and after training, they overstate their gains to emphasise how much they have learned from the training.

While the second explanation is a theoretical possibility, our evidence may be stronger for the first claim. However, we can argue that individuals cannot recollect the score they gave in the first questionnaire, therefore the second re-assessment is a more realistic assessment of their pre-training capabilities.

Moving beyond self-assessment: testing participants

The alternative to self-assessment is to provide participants with a test. This can be through survey questions testing participants' knowledge or understanding of a concept, or through assessment within the classroom. The former, however, lends itself better to a quantified analysis and is therefore easier for comparisons when it comes to improvements in the distance travelled.

Consider **Table 6**. These are survey results from a question in which the training respondents were given seven scenarios (shown in the first column), and asked whether they considered the scenario predominantly

teacher or learner centred. The second column is for scores for the number of respondents who thought the scenario was teacher centric before training, the third column is for after training, the fourth column is a percentage for correct answers, and so on for the learner-centred approach. For your reference, the correct answer is given in red.

The table shows that respondents answering after the training were better able to identify the correct approach in all but one instance (the exception being the first scenario with Mary). Our respondents scored well on both tests, 84.2% of them being able to identify the approach before training. After training this rose to 91.4%.

If we had not done the initial study before the course, we could have measured our success with the lofty figure of 91.4% in isolation. However, our pre-course survey showed that respondents were already largely well aware of the differences between teacher- and learner-centric approaches. The true distance travelled here was 7.2%.

Participant scores on how well they identify the learner- or teacher-centred approaches

Table 6

Scenarios	Teacher-centred (before training)	Teacher-centred (after training)	% giving correct answer	Learner-centred (before training)	Learner-centred (After Training)	% giving correct answer	Response Count
Mary sets written assignments to assess her students' understanding of the lesson taught	14	5	73.7%	5	7	65%	19
Joseph stands at the front of the classroom for most of the lesson	17	2	89.5%	2	0	100%	19
At the beginning of each session, Precious asks students to rate their skills in a new topic	1	18	94.7%	18	20	100%	19
Innocent expects students to take notes throughout the class	15	4	78.9%	4	0	100%	19
Chipo likes the students to be quiet when she is delivering the facts	18	1	94.7%	1	0	100%	19
Anesu shows students how to use e-databases before setting them a problem to see how they apply these skills	4	15	78.9%	15	19%	95%	19
In Jabulani's class, students often contradict his ideas	4	15	78.9%	15	16	80%	19

Participant scores on how much they value learner- or teacher-centred approaches

Table 7

Scenario	Approach	Teacher-centred approach		Learner-centred approach	
		Value before training	Value after training	Value before training	Value after training
Mary sets written assignments to assess her students' understanding of the lesson taught	Teacher	47.40%	35%		
Joseph stands at the front of the classroom for most of the lesson	Teacher	15.80%	0%		
At the beginning of each session, Precious asks students to rate their skills in a new topic	Learner			78.90%	95%
Innocent expects students to take notes throughout the class	Teacher	15.80%	0%		
Chipo likes the students to be quiet when she is delivering the facts	Teacher	0%	5%		
Anesu shows students how to use e-databases before setting them a problem to see how they apply these skills	Learner			100%	95%
In Jabulani's class, students often contradict his ideas	Learner			52.60%	65%
Averages		19.75%	10%	77.17%	85.00%

Behavioural change: attitudes and values

One of the major focuses of the IDS information literacy programme is not only to improve participants' skills, in the narrow technical sense, but also their attitudes and values. Using the same scenarios as the above questions, in which respondents were tested on their ability to identify the approach being used, **Table 7** looks at how much they *valued* the respective approach.

Out of the seven scenarios, four are examples of the teacher-centric approach and three are learner centred. Respondents were asked to place a value on each of them before and after their training. The table shows the percentage of respondents who rated the scenario either four or five out of a five-point scale (one being the lowest value, five the highest). The results above indicate that respondents placed far higher value on the learner-centred scenarios both before (77.17%) and after (85%) training.

The advantage of having the pre-training survey was that we were aware, even before providing the training, that our participants valued the learner-centred approach. Had they been a more traditional group who distrusted learner-centred approaches, it would have been useful to know beforehand and to tailor our workshop accordingly.

Guidance

The T-Test and how to apply it

The most common method used to establish whether two groups differ statistically is comparison of the two means (the mathematical averages). Sometimes though, this can lead to misleading conclusions.

Consider this example: you are about to facilitate a workshop on information literacy that emphasises the importance of search strategies. Before training begins you test the participants on their search skills, and they score an average of 50%. This is the baseline against which any progress after the workshop will be measured. You give the participants another test after the course, on which they average 60%. You decide your main objective has been met: the participants' search skills are, on average, better as a result of your workshop.

Your conclusion, however, might be premature. Fluctuations in the mean often occur by chance,

particularly in small groups. It might be the case, for example, that a handful of participants have improved substantially while the rest remain at roughly the same level and that this scattered improvement artificially inflates the mean.

This is where the t-test is useful. The t-test looks at the *standard deviation* in your sample and considers this in the light of your sample size. (The standard deviation is the extent to which each of the participant's performance deviates from the class's mean.)

The t-test will reveal whether your confidence in having made a difference to your participants' performance is justified, i.e. if you have a large enough sample size and your participants' improved performance is realised across the board.

The t-test is used for sample sizes of fewer than 30, but the closer you are to 30 the more confident you can be with your data.

Box 9

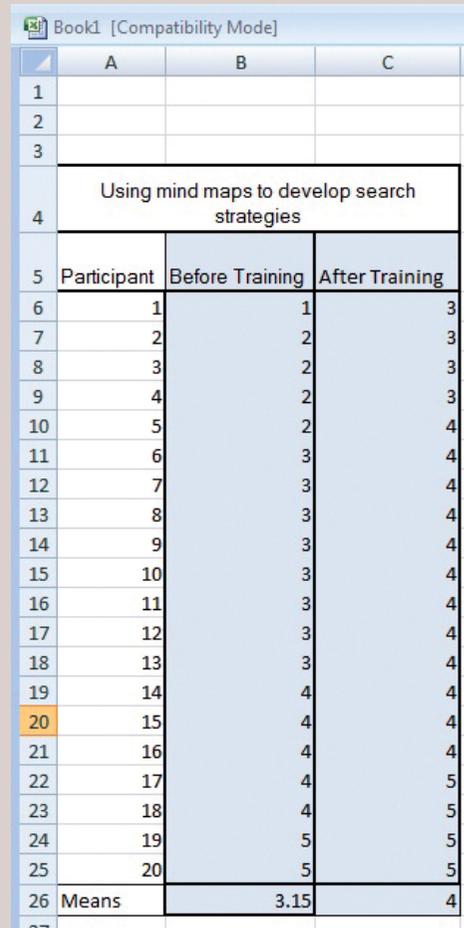


Guidance

Using T-Tests in Microsoft Excel (MS)

The following is a step-by-step guide to using t-tests in Microsoft Excel 2007 (though other spreadsheet software also has the necessary functions). You may need to amend these instructions or download a TOOLPAK depending on the version of Excel loaded on your PC.

1. Transfer your data into a spreadsheet. So, for our example presented in the **Case Study 11: Using the distance travelled**, we have pre- and post-workshop scores for 20 participants asked to rate from one to five their skills in 'Using mind-maps to develop search strategies', with one being the lowest score, five the highest. As you can see in **Table 8**, the average before training was 3.15 and after training four. Our task is to find out whether this is a significant difference.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C
1			
2			
3			
4	Using mind maps to develop search strategies		
5	Participant	Before Training	After Training
6	1	1	3
7	2	2	3
8	3	2	3
9	4	2	3
10	5	2	4
11	6	3	4
12	7	3	4
13	8	3	4
14	9	3	4
15	10	3	4
16	11	3	4
17	12	3	4
18	13	3	4
19	14	4	4
20	15	4	4
21	16	4	4
22	17	4	5
23	18	4	5
24	19	5	5
25	20	5	5
26	Means	3.15	4

Table 8: individual responses and their means

Box 10

2. Go to the 'Formulas' toolbar, then to 'More Functions,' and finally to 'Statistical'. Here, you will find an option for the t-test. Below, **Figure 6** shows the box that appears after this selection.

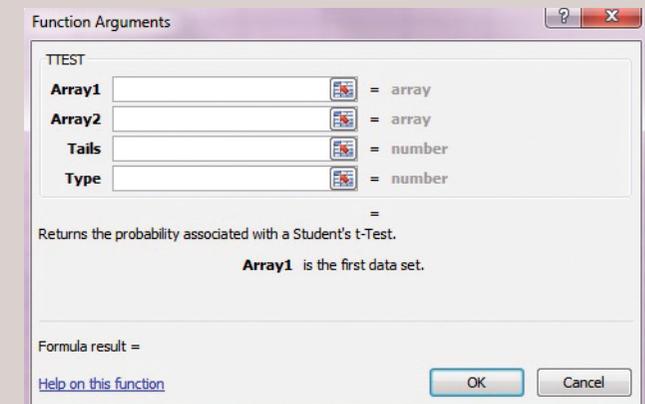


Figure 6: screen grab of first step in using T-Tests in MS Excel

Box 10 (continued)

Fill these in as follows:

3. Array 1 – select all your scores for the first sample (i.e. the scores for the pre-workshop test)
4. Array 2 – Select the scores for the sample against which you want to compare Array 1 (i.e. the post-workshop scores)
5. Tails – you must specify a one- or two-tailed hypothesis. A one-tailed hypothesis specifies direction, so for instance it claims that Array 1 will be greater than Array 2. A two-tailed hypothesis is non-directional, so it merely states that there will be some kind of difference between Array 1 and 2 without specifying which is likely to be greater. In M&E, we are generally looking for an improvement of some sort, so usually we will choose a one-tailed test, which is more powerful (because the test is only 'looking' for effects in one direction).
6. Type – You choose Type 1 when your population is paired. This is the case when, for instance, you carry out two tests for one group. So, for instance, your Array 1 and Array 3 comprise the same people just in different points in time. Type 2 compares two different groups when there is an equal variance. Type 3 compares two different groups when the variance is unequal. An unequal variance is when one data set is more scattered than the other, i.e. a data set in which there are substantially higher and substantially lower figures than the mean.

Below, **Figure 7** shows the Excel table filled in for our worked example. On clicking 'OK' you get the figure: 0.001813.

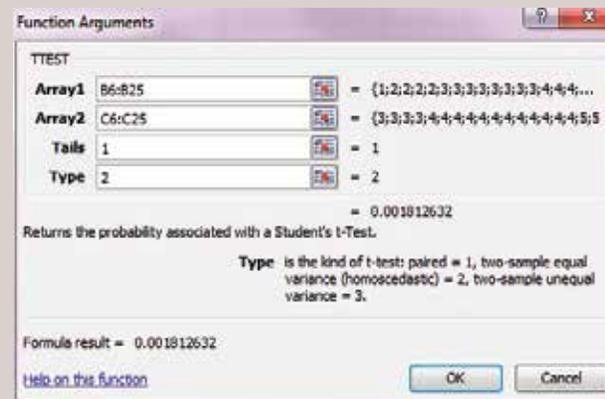


Figure 7: completed T-Test box in MS Excel

This is your p value. The p value is the likelihood that the difference between the two means is due to chance. As a percentage, our likelihood is 1.8% that the fluctuations in the two means are random. The norm in social science research is to accept anything lower than 0.05¹⁴, which indicates a less than 5% likelihood of chance fluctuation.

Given that your p value is lower than $p = 0.05$ you can say with some confidence that "this effect is not due to chance alone".

14. <http://www.medicine.ox.ac.uk/bandolier/booth/glossary/pvalue.html>

M&E in action Stage 8: Learning from M&E

? Key questions

Learning from your M&E

- How will you review what you have learned from your M&E activities?
- Who needs to be involved?
- What is the best way of embedding learning in the organisation?
- How will I ensure lessons turn into actions?

There is a clear progression from data analysis, to the drawing of conclusions, to decisions about the refining and improvement of training interventions, to other decisions about, for example, replacing the training or acquiring additional resources. This is the pathway you now want to go along.

However, learning is a continuous process. The *learning cycle* starts at the beginning of an intervention and continues through and beyond it.

Regularly considering ‘lessons learned’ and planning what to do to address them will help you increase the impact of your information literacy training interventions. To do this well, aim for:

- Participation and consensus from all stakeholders
- A balance of *generative* (creative) and *adaptive* (survival) learning, so it’s not just about ‘what do we need to fix’ but also ‘what could we do better or differently?’
- A simple process which becomes familiar and embedded within the organisation
- A process where people feel ownership of the learning, so they are motivated to implement action plans

It is also worth considering what we know already about effective follow-up of M&E initiatives. A survey of 282 evaluators and evaluation managers¹⁵ found the most important strategies for facilitating the use of M&E data to be:

- Planning for learning at the beginning of an evaluation
- Identifying intended users and intended uses of the evaluation early on
- Communicating findings to stakeholders as the evaluation progresses
- Developing and implementing a learning and communication plan

Factors affecting learning

We sometimes assume that learning ‘just happens’. Unfortunately, it mostly doesn’t. Factors which have been identified¹⁶ as influencing effective learning include:

- Organisational culture
- Individual ability and confidence
- Power and hierarchies
- Donor support
- Personal resources (time and energy)
- Motivation
- Quality of facilitation
- Accessibility of information

Table 9 provides tips for optimising each of these factors, but you will need to examine your own organisational and individual context to work out how best to make sure that learning from your own M&E becomes a reality.

15. Preskill, H. and V. Caracelli (1997). Current and Developing Conceptions of Use: Evaluation Use TIG Survey Results. Evaluation Practice, Fall 1997, 18:3

16. A number of these are described in:

Kusters, C., van Vught, S., Wigboldus, S., Williams, B. & Woodhill, J. (2011). Making evaluations matter: A practical guide for evaluators. Centre for Development Innovation, Wageningen University & Research centre, Wageningen, The Netherlands. www.cdi.wur.nl

Cites: Preskill, H. (2007) Process Use, in Encyclopaedia of Evaluation, by Mathison, S. (Ed). Thousand Oaks, CA, Sage, pp. 327-28

Preskill, H. and Russ-Eft, D. (2005). Building Evaluation Capacity: 72 Activities for Teaching and Training. Thousand Oaks, CA, Sage Publications

Tips for enhancing learning

Table 9

Factor	Tips
Organisational culture	<p>Is learning embedded in the strategy and operational plan?</p> <p>Are employee reward structures designed to reward learning?</p> <p>Do senior management take learning seriously and attend learning events?</p>
Individual ability and confidence	<p>Is some training in understanding information (e.g. qualitative and quantitative data) desirable for some staff?</p> <p>Are there events designed so everyone's voice can be heard?</p> <p>Does the group feel 'safe' for each individual?</p> <p>Are individual preferences in how to communicate (sketches, drama, poems, words, videos, photos etc.) taken into account?</p> <p>Are learning cycles designed so that different learning styles can be encompassed?</p>
Power and hierarchies	<p>Are events designed to minimise the symbols of hierarchies (for example when considering invitees, seating plans, roles assigned)?</p> <p>Do senior staff genuinely listen to more junior staff?</p> <p>Are the results of learning events valued, and are they taken seriously and acted on?</p>
Donor support	<p>Is there a budget line for learning cycles?</p> <p>Are donors involved in organisational learning?</p> <p>Are results communicated to donors?</p>
Personal resources	<p>Is learning a formal element of individuals' roles?</p> <p>Are events scheduled sensitively in terms of peak times in individuals' roles?</p>

Tips for enhancing learning

Table 9 (continued)

Factor	Tips
Motivation	Are events designed with short-term and long-term benefits in mind? Are they enjoyable?
Quality of facilitation	Is there a designated facilitator(s) for learning events? Is the event planned carefully? Does the facilitator have a range of tools and exercises available to examine the information from different perspectives?
Accessibility of information	Is the 'raw material' for learning easily accessible in terms of technology, readability, language? Is there a structure for storing the output of learning events so that it is not lost?



Designing learning cycles

Before any learning cycle event, you need to ensure that your key stakeholders and the facilitator¹⁷ of any learning event you hold are clear as to what is meant by lessons learned. Also, why you need to identify them. That may, for example, be for reporting to primary stakeholders, partners or funders, or perhaps to deal with a crisis or as a strategy to support fundraising.

You also need to consider some specifics. What is the information you are planning to review and how will it be disseminated to the participants? Similarly, how will you share the lessons in the end? It could be verbally, or in writing, or by video, or through drama etc (see **Stage 9: Communicating findings**).

Who should be involved in your event? On occasion, there may be arguments for subdividing the event into, for example, lessons for trainers, lessons for the organisation and lessons for programme design.

You need also to build into your cycle measures for making sure your lessons learned go forward into planning activities.

Tips

Encourage participants to engage with your M&E material by holding an ‘insight generation’ session in which you ask them a series of questions:

- What did I hear which confirmed what I already know?
- What did I hear that was new?
- What surprised me?
- What excited me?
- What worried me?
- What contradicts something I thought I knew?

The answers (the ‘insights’) can then become the raw material for a lessons learned session.

Formulating and documenting lessons learned

When shaping a lesson learned, you should:

- **Include a generalised principle.** It should be more than just an observation or a description.
- **Place the lesson in its context.** People need to understand the situation in which the lesson learned occurred.
- **Justify the lesson with evidence.** Or describe how such evidence might be gathered, if it is a hypothesis.
- **Consider the lesson’s usefulness.** Check it is neither too general nor too specific.

Depending on how you plan to use, disseminate and store your lessons learned, you may wish to come up with your own template. You may want to include the following information:

- The theme of the lesson
- Your original understanding or assumption
- Your revised understanding or assumption
- The evidence for, or examples of, this lesson?
- The action you intend to take, with timescales and individuals responsible

¹⁷ Managing for impact in Rural Development: A guide for project M&E. www.ifad.org

Methods and tools for learning from M&E

Tools for learning from M&E tend to cluster into two types: tools to support *convergent thinking* (bringing material together) and tools to support *divergent thinking* ('out of the box' thinking). Ensure that you build in both of these into whatever overall method you adopt.

Examples of tools for convergent thinking include brainstorming where you write the ideas on cards and then cluster the cards and label the clusters¹⁸. Mind-mapping¹⁹ is another method, and 'virtual' mind-mapping tools are available for working remotely.

There are many tools available for promoting divergent thinking. Most of them involve either making random connections or deliberately taking a different perspective. For example, one exercise involves four 'Rs' where these are 're-expression' (using different words or senses), 'related worlds' (finding a 'world' where a similar problem has been solved), 'revolution' (breaking the rules) and 'random links' (forcing connections with random stimuli to create new insights).

Finally, Focused Conversation²⁰ is a useful tool for either kind of thinking. It involves a guided conversation through objective, reflective, interpretive and decision kinds of thinking, and can embody more creative elements at the interpretive stage. See the description of ORID, in **Stage 6: M&E during training and immediately after training**.

18. <http://oqi.wisc.edu/resourcelibrary/uploads/resources/Consensus%20Workshop%20-%20Description.pdf>

19. <http://www.mind-mapping.co.uk/make-mind-map.htm>

20. Mok, A. (2008). *The focused conversation method*. Available: <http://fnsingapore.blogspot.co.uk/2008/08/focused-conversation-method.html>. Last accessed 23 Feb 2013

Who should be involved?

We recommend that everyone who has a stake in the organisation be involved in learning cycles, and that the learning takes place in groups rather than as a personal study activity. The workshop is by far the most common method used for organisational learning. Gathering the project team (or facilitation team) and trainees together is also a useful method.

The advantage of working with groups of stakeholders rather than individuals are:

- Different perspectives facilitate the emergence of new information and ideas
- Different perspectives help to limit biases
- Achieving consensus about lessons learned makes it easier to agree on and implement actions

It may though not always be ideal to gather stakeholders in one single group. You may need to run a series of events at different levels in the organisation, sending the lessons learned up through the various levels of decision making. Alternatively, it may be more practical to hold a single event with representatives of different stakeholder groups. If you do this, consider how you will communicate with those who cannot be present and ensure their commitment to any actions agreed. Whatever you decide will work best for your organisation, try to ensure no individuals or roles are marginalised.

Logistics of learning cycles

The logistics of learning cycles will be specific to each organisation. However, here is a checklist of things to consider:

Timing

Mini 'lessons learned' sessions can be built into regular monthly or quarterly meetings. However, a substantial session usually happens just before finalising the design of an intervention and then either annually or at the mid- and endpoint of an intervention.

Facilitation

A skilled facilitator is critical to the success of a learning event. Internal facilitators know the organisation and often the individuals concerned well, may be easier to schedule and usually are more economical to use. However, it may be hard for them to distance themselves from the event and challenge organisational assumptions. If you have relationships with other organisations, you could offer the 'loan' of a facilitator for the loan of one of theirs. In a large organisation, it may be possible to 'borrow' a facilitator from another programme or site.

Venue/space

Ideally, a learning event should happen away from the organisation's offices to help people focus. It also indicates how seriously the organisation takes the activity. A learning event could even be included as part of a larger activity such as strategic planning.

Face-to-face or 'remote' events

Where staff are geographically scattered, it may be worth considering a 'virtual' event using software such as Adobe Connect.

Next steps in the learning cycle: inspiring action

One way to categorise organisational learning is to identify the three action 'levels' at which they occur.²¹

1. **Single loop learning**, which involves checking whether we are 'doing things the right way'. It involves watching for and correcting deviations from the organisational norm.
2. **Double loop learning**, which involves changing the rules by asking the question 'are we doing the right things?' This helps us to reframe our thinking and fosters innovation and creativity.
3. **Triple loop learning**, which involves questioning the entire rationale and values of an organisation.

It is easy to focus on the specific, small actions of single loop learning at the expense of double and triple loop learning. The best way of ensuring that your actions are designed at the right level is to plan this into the learning event at the outset.

Kotter (2002)²² describes eight steps which help to ensure that actions lead to the desired changes in organisations:

1. **Create urgency** For example, make objectives real and relevant. This inspires people to act.
2. **Build the guiding team** Get the right people in place with the emotional commitment and mix of skills and levels to help lead the change process.
3. **Get the vision right** Get the team to establish a simple vision and clear strategy based on the findings and recommendations of the evaluation.
4. **Communicate for buy-in** Involve as many people as you possibly can and communicate your vision and strategies often and in a simple way. Have a clear message and make technology work for you.
5. **Empower action** Put in place a structure to facilitate change. Try to identify pockets of resistance and remove barriers quickly. Allow for constructive feedback and support from leaders. Recognise and reward those who make change happen.

6. **Create short-term wins** Complete current stages before starting new ones. Reward those who help you to meet your objectives.
7. **Don't let up** Foster and encourage determination and persistence. Analyse every achievement and ask yourself what went right and what needs improving.
8. **Make change stick** Tell success stories of change within your organisation. Reinforce the value of successful change via recruitment, promotion, and new change leaders. Weave change into the culture of the organisation.

Achieving these eight steps helps to create a true, virtuous learning cycle, where the changes achieved through learning and then taking action help to create an atmosphere where leaning becomes rewarding in its own right.

21. Ramalingam, B. (2010). *Organisational learning for aid, and learning aid organisations*. Available: <http://www.capacity.org/capacity/opencms/en/topics/learning/organisational-learning-for-aid-and-learning-aid-organisations.html>. Last accessed 23 Feb 2013

22. Kotter, J.P. and Cohen, D.S. (2002) *The Heart of Change: Real-life Stories of How People Change Their Organizations*. Harvard Business Review School Press, Boston, Massachusetts

Summarised in Kusters, C., van Vught, S., Wigboldus, S., Williams, B. & Woodhill, J. (2011). *Making evaluations matter: A practical guide for evaluators*. Centre for Development Innovation, Wageningen University & Research centre, Wageningen, The Netherlands. www.cdi.wur.nl



Case study 12

Using self-evaluation for team learning

In 2010, IDS's British Library for Development Studies (BLDS) and the Information Training and Outreach Centre for Africa (ITOCA) worked together to repurpose an information literacy 'training of trainers' course. This course aimed to train participants to use a suite of Research4Life (R4L) database tools and help them pass on this knowledge to others within their institutes. BLDS and ITOCA wanted to introduce into the course a more participatory method of training and more generic information literacy and training skills. The objective was to increase the breadth of skills course participants could pass on and their capacity to train others to use R4L products.

From the outset, both IDS and ITOCA were keen to evaluate the repurposed course. The team designed the new course to capture skills, knowledge and behaviour information from participants before and after they took part in it. They also ran the new and original courses in parallel so they could compare outcomes.

Many months after the repurposed course was launched the team employed a facilitator to guide them through the participatory evaluation method FSE (see **M&E in Action**). They chose this method rather than commission an external evaluator because this enabled them to build the evaluation skills and experience of internal staff members. There were also cost considerations.

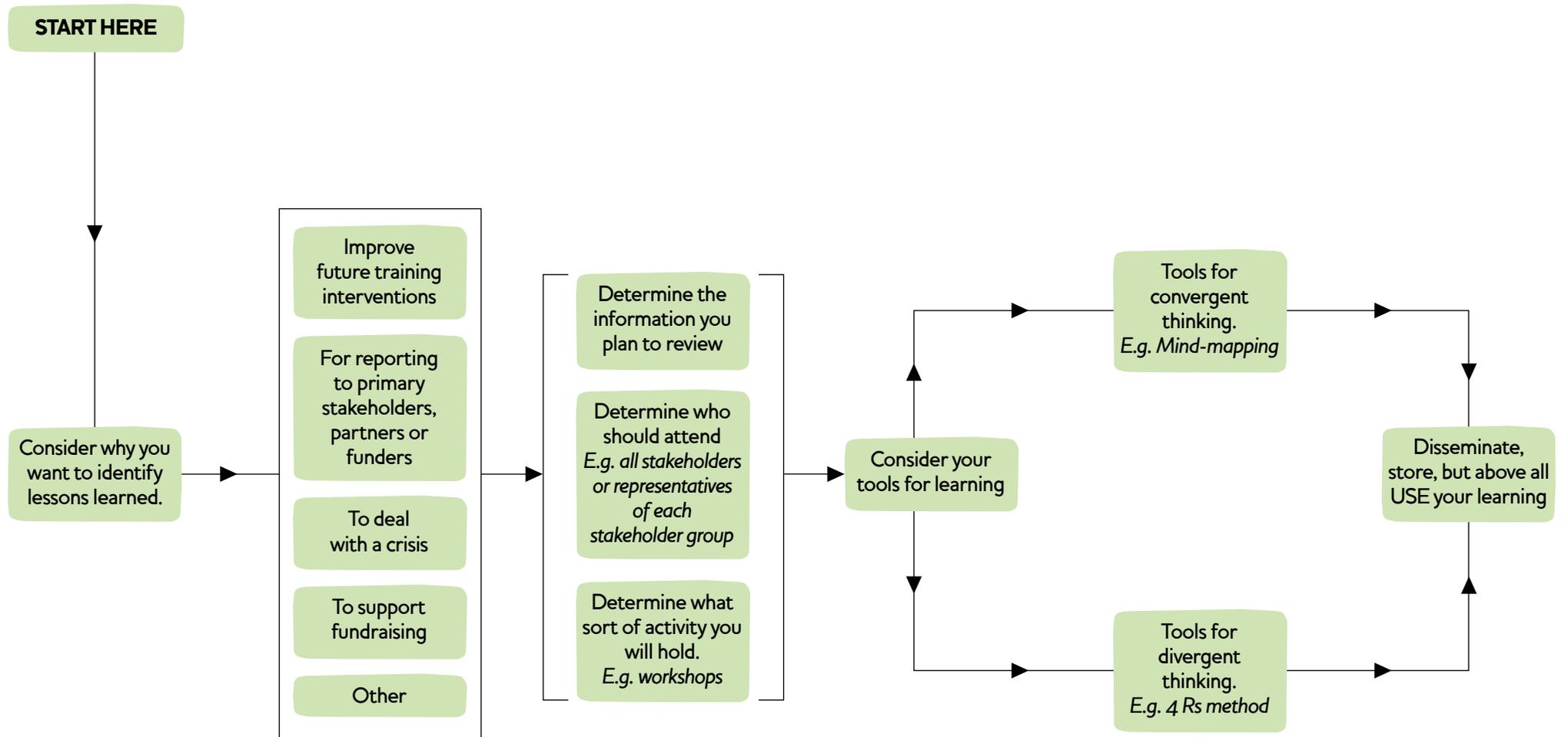
The FSE team was made up of six senior staff members from ITOCA and IDS, and it was involved in all stages of the evaluation, from deciding the evaluation questions to collecting the data, and from data analysis to reporting the findings. The process required a considerable time commitment from all team members and some commitment of funds to commission additional data collection.

The project under scrutiny was well suited to FSE as it was tightly defined and had clear and tangible outcomes, allowing the practitioner-team to build a straightforward theory-based evaluation based on

their previously articulated assumptions about how the repurposed course would effect change. The evaluation was mixed method and drew together quantitative and qualitative data, including existing participant satisfaction and survey data, a series of before and after course evaluations, administrative data and programme documentation, and newly collected data from participants and other stakeholders using an online survey, questionnaires and interviews.

The result was a comprehensive evaluation that included some clear conclusions and tangible recommendations. From the facilitator's point of view, the quality and legitimacy of the evaluation findings benefited greatly from the involvement of senior staff members in the inception and analysis workshops. From the practitioners' point of view, most team members reported that they learned about the practicalities of doing evaluation as well as the strengths and weaknesses of their own project.

Learning from M&E



M&E in action Stage 9: Communicating findings

? Key questions

Key Questions: Communicating your findings

- Who needs to know your M&E findings?
- What is the best way to reach each audience?
- Have you determined your key messages?
- Have you used appropriate visualisation tools to communicate your findings?

To learn from the M&E of your information literacy intervention you need to communicate your findings effectively. There are two main ways of doing this:

- Verbally
- In writing

People are much more likely to engage with your communications, and so learn from them, if you make them compelling. Verbal communication at its most basic may comprise a face-to-face presentation. You might also consider producing a video presentation, a webinar or a podcast. With these, you can be more creative, address people who may not be able to attend a one-off event and provide an engaging, long-lasting resource for people.

A written communication at its most basic is a full report. This, in fact, tends to be the default position for M&E communication. Be wary of the chunky report in English though. It may fulfil a funder's evaluation demands but too

often it does little more than languish in a drawer. Other more effective written communications may include short summaries, photo essays or bullet-pointed lists.

Your stakeholder analysis (see **Stage 3: Identifying challenges**) will have identified the different audiences you need to address for your M&E communication as well as provided information to help you understand their needs. Consider the different needs of your audiences when considering how you want to communicate with them.

It is often worth planning more than one communication to effectively meet the needs of different audiences. For example, an evaluation of a training intervention to increase understanding of politics among Welsh young people with learning disabilities resulted in one 'standard' evaluation work and a two-page 'easy-read' document aimed at the young people who participated in the training.

Determining your key messages

The *key messages* of your M&E will be an expression of the learning you have gained from those patterns that emerge from your data analysis. Most are likely to relate to whether or not you have fulfilled the objectives of your training intervention. Others patterns unrelated to your objectives but nevertheless of significance to future training interventions may emerge too so look out for these. We will consider this in more detail in **Stage 9 – Learning from your M&E**.

In your communications, try to articulate your key messages as simply as possible at first, preferably in one sentence. You can elaborate on them later in your report,

presentation etc. Try also to keep them to a manageable number by prioritising them – and when listing them in your communication, list them in order of their significance for learning.

Conveying your key messages

Regardless of whether you choose to communicate via a presentation or report or some other means, consider whether your key messages can be represented in a more compelling way using *data visualisation* tools.

Visualising quantitative data

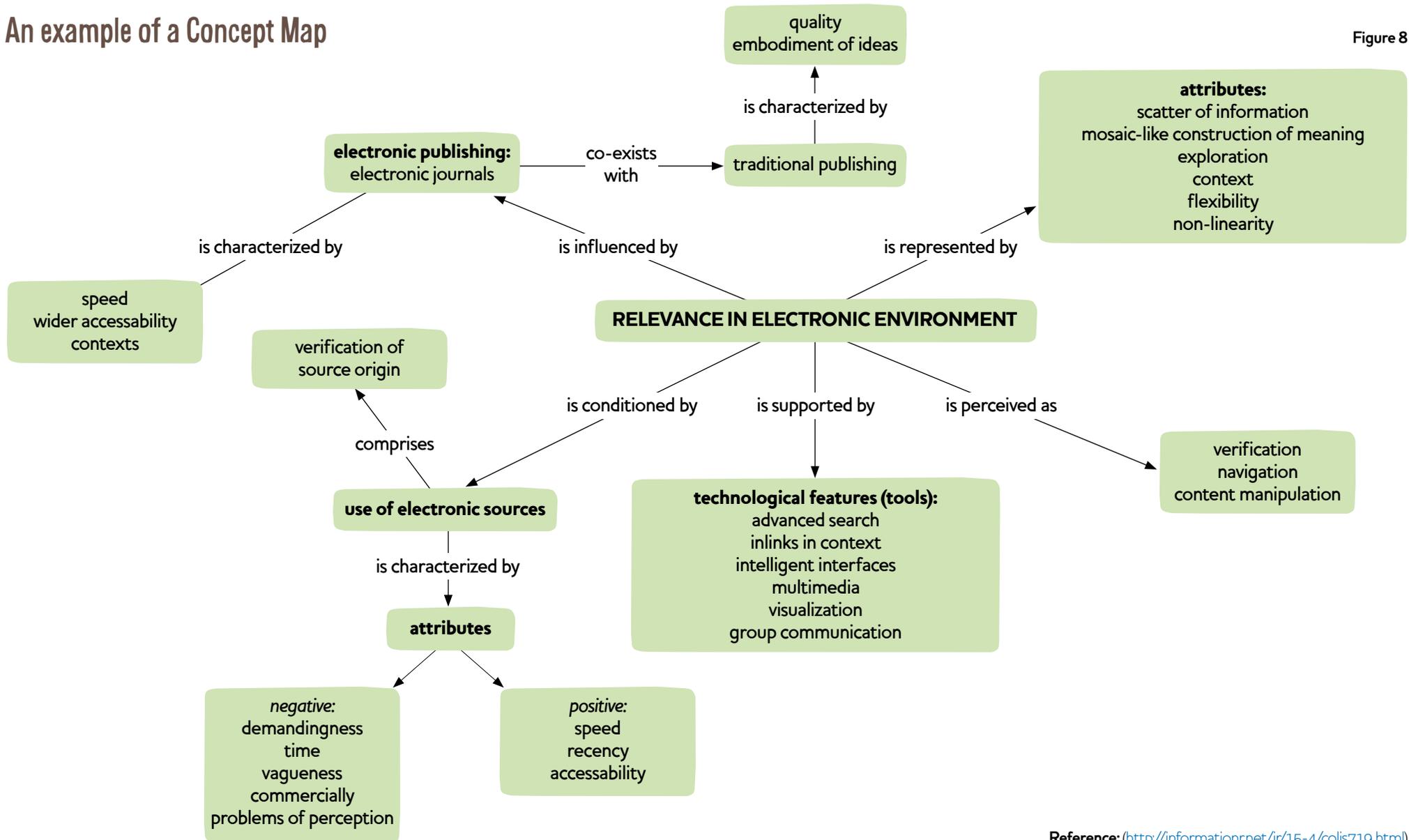
There is a wide range of default graph styles available in Microsoft Excel which you can customise so that they reflect both your in-house style and the information you are trying to convey. If you are comfortable with basic graphs, you could also consider ways of making your graphs dynamic or interactive, either by building them up step by step within a Microsoft PowerPoint presentation or by using online interactive software e.g. Prezi or Tableau Public.

Visualising qualitative data

The standard way of reporting qualitative data is by using quotes. This is always likely to be necessary but other methods can be more compelling. For example, you could consider mind-maps, taxonomies/flowcharts, concept maps and concept trees to illustrate the main concepts you have identified and to communicate your story.

An example of a Concept Map

Figure 8



Reference: <http://information.net/ir/15-4/colis719.html>

The importance of transparency

Finally, you should note that the presentation of your findings, from how you analysed your data to any relevant conclusions, should be as transparent as possible. Presentation is particularly important in cases where there is a line of accountability from trainers to host organisations or sponsors as there are likely to be expectations that need to be fulfilled. Host organisations and sponsors will want some sort of demonstration that objectives are being met and their organisational aims addressed.

Case study 13

Using video to communicate to our donor

The IDS information literacy programme reports to its donor, DFID, as a major part of its work. Examples of outputs, outcomes and impact are provided in a number of ways, but a written report, supported by a face-to-face presentation, is usual. However, in October 2012, where staff were unable to attend a quarterly review meeting, an offer was made to produce a video presentation.

Information we wanted to report on included progress against project milestones, the number of people reached in the programme, and evidence of impact through statements and statistics. We employed a technique used by illustrators when they want to demonstrate concepts using images. This saw us making use of a range of hand-drawn images as a starting template and then shifting the camera to hand-drawn images, text and statistics as the report was related off-camera. Between these two elements, a narrator was only briefly introduced to camera.

This technique is particularly helpful for people who are not entirely comfortable speaking to camera and it worked excellently for this report. A large whiteboard was used to deliver the presentation, with the camera moving physically three times during shooting, giving us the opportunity to shoot the report in several short films.

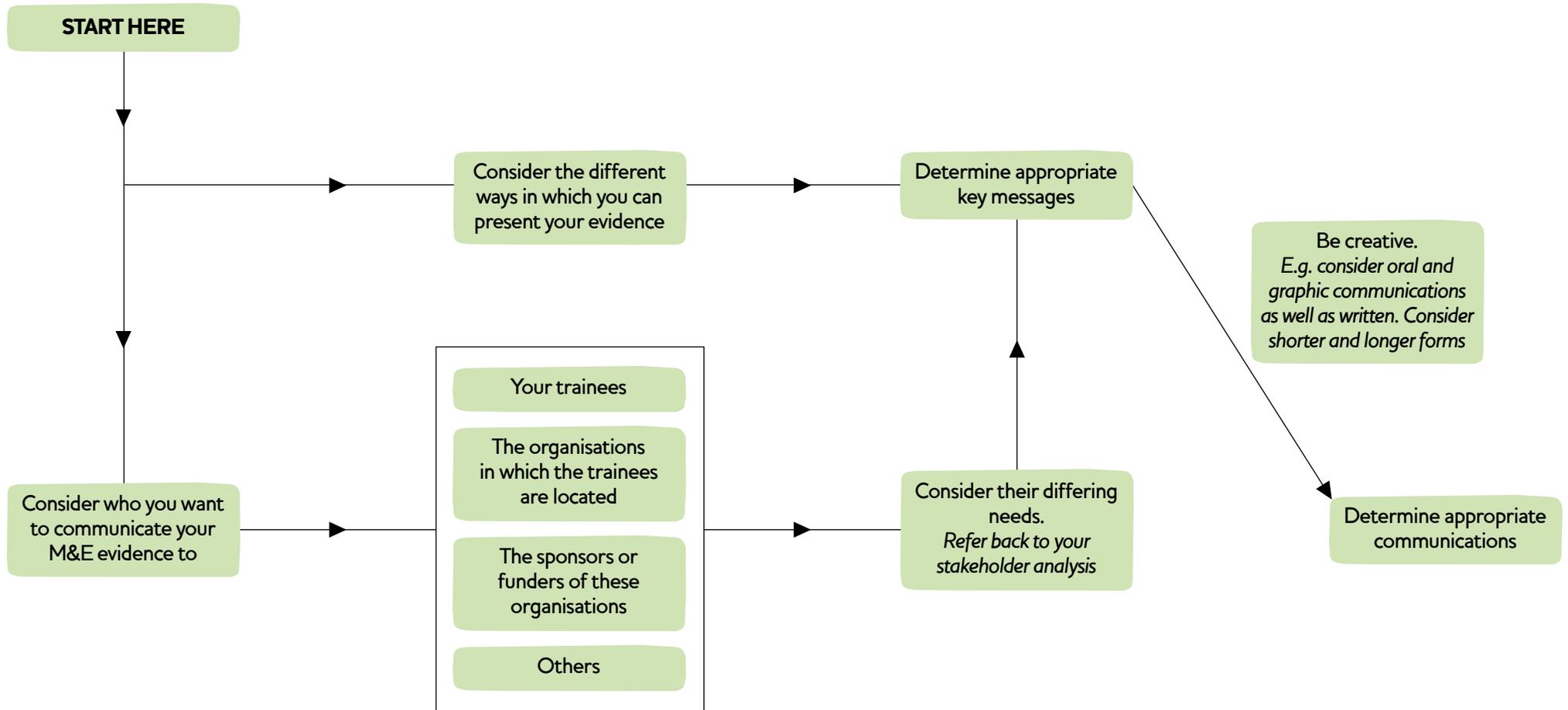
The video report was to be 10 minutes long but more video than this was actually taken so the final film was cut using Microsoft's Live Movie Maker. We found it an easy tool to master and it enabled us to splice (join) sections of the film together once we had decided what sections we could cut. Taking out the awkward silences also meant we could produce a more professional product.

The final version of the film was presented to DFID – and its success can be gauged by the fact that they have asked IDS to continue reporting in this way. We also showed the film at an international advisory group meeting a few months later.



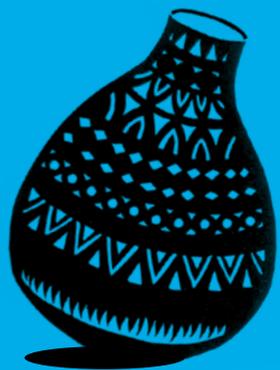
Communicating findings

Flowchart 9



TOOLKIT APPENDICES

This toolkit can only touch the surface of M&E practice. Find out more by exploring the following definitions, tools and resources.



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Appendix 1: Glossary of assessment and evaluation methods and tools

Bulletin boards, online discussion forums, blogs and wikis

These enable discussion and the sharing of views as well as peer-to-peer learning. These are particularly useful when trainees are not physically in the same location, or when they are on staggered timetables.

Delphi process

The Delphi technique is a quantitative option aimed at generating consensus. It solicits opinions from groups in an iterative process of answering questions. After each round the responses are summarised and redistributed for discussion in the next round. Through a process of convergence involving the identification of common trends and inspection of outliers, a consensus is reached.

In its original form, question rounds are administered in writing, for instance distributed by email. The technique has been adapted for use in groups face to face with the heart of the process remaining intact, allowing individuals time to reflect and an equal opportunity to contribute.

Diagnostic tests (post-diagnostics)

The form of such tests is likely to be similar to pre-diagnostic tests (indeed, the same test might even be repeated). What is being assessed is the level of knowledge, understanding and skills following a training intervention, and the amount of progress achieved by the learners as a result of the intervention. These assessments may take many forms, including questionnaires, demonstrations of ability to use particular resources and focused exercises such as scavenger hunts.

Diagnostic tests (pre-diagnostic)

These forms of assessment provide instructors with information about trainees' prior knowledge and understanding before beginning a learning activity. They indicate the strengths and weaknesses of trainees and enable training to focus on and be adapted to genuine needs. They also provide a baseline for determining what new knowledge, understanding and skills have been developed during the course of the training. They may typically take the form of questionnaires (including multiple-choice questionnaires), surveys or interviews. Increasingly these are administered electronically using web-based tools such as SurveyMonkey (<http://www.surveymonkey.com>).

Distance-travelled

The distance travelled is a valuable tool for measuring the outcomes of interventions. It helps the trainer measure the progress a trainee has made towards achieving the learning outcome. This is achieved by asking the trainee, in a post-training questionnaire, to retrospectively reassess what their competency levels were prior to attending the training. They are then, in that same questionnaire, asked to rate their skills after training. The difference between these two figures is then compared and this forms their distance travelled. The distance travelled is based on the premise that we are better able to communicate what was 'unknown' when we are shown the gaps in our prior knowledge; so when we reassess our skills after training, we are better positioned to realise what we did not know.

Drama, puppetry or role-play

Learning exercises which allow participants to experience a particular situation through the presentation and/or enacting of different viewpoints and perspectives.

Drawings

Drawings tend not to be interpretable in their own right, but can be a useful tool to elicit oral stories.

Evaluation wheel (also known as Spider Tool)

An evaluation wheel is a tool to measure the degree of usefulness, satisfaction, or achievement of an outcome. It can be used in a group process (such as the evaluation of a workshop) or completed individually. The wheel is divided up into segments (usually 6 or 8 segments). Each segment of the circle is labelled with one aspect of the service to be evaluated.

Participants are asked to draw a line (like a 'spoke' of a wheel) in each segment from the centre towards the outer rim of the circle. Participants decide to what degree they are satisfied with each aspect being evaluated, or to what degree the outcome has been met, by drawing a line in each segment from the centre to the rim. The closer the line is to the rim of the circle, the more satisfied the service users are with that aspect, or the greater degree the outcome has been achieved.

Focus groups

Focus group sessions and participative workshops (including ‘consensus workshops’) involve bringing together a small group of either trainees or trainers or both for a facilitated discussion. They are used to enable reflection on the desired or completed teaching and learning. Key questions are determined in advance. The group nature encourages ideas to flow. These can be particularly useful in the context of needs assessment, as they can provide an insight into prospective trainees’ perceptions and attitudes. Focus groups are highly dependent on the abilities of facilitators. Data can be captured using video, recordings or flip charts, or a combination of these.

Graphical facilitation

Graphic facilitation is a type of group facilitation that uses visuals and graphic images along with text to document a group’s comments.

Instant response techniques

These are used at the end of courses, where participants are asked to address a short number of simple questions, typically to ascertain their broad view of the training received, their general understanding of what they have covered, the extent to which they might apply what they have learnt, etc. Electronic tools such as iClickr can be used to allow one-click responses to each question, which are collated and projected almost instantly on a screen to provide a graphical representation of the overall view from participants.

Interviews

The use of a series of well thought-out and structured questions (which might incorporate tests) to elicit a view of either (i) the extent of prospective knowledge and understanding prior to a training initiative, as part of the assessment of their needs, or (ii) what has been learnt through a training initiative, and the development of trainees’ understanding following it. Interviews can be undertaken face to face or virtually (using telephone or chat), and they may involve speaking to key informants and stakeholders as well as trainees.

Logframes

A logframe is a tool is “a tool to help designers of projects think logically about what the project is trying to achieve (purpose), what things the project needs to do to bring that about (outputs) and what needs to be done to produce these outputs (activities).” DFID

A logframe provides a simple summary of the project strategy and helps to plan and monitor a project’s outputs and outcomes. In information literacy a logframe can be used to link the interventions objectives with regional and/or organisational objectives.

Keypad technology (live polling)

A live polling system based on mobile-based technology. It offers the same functionality as instant response systems (such as iClickr) but uses mobile phones to poll trainees and gather live feedback. It can also be used in student assessment. The pricing plan varies with some provision for free usage. These services offer a relatively inexpensive alternative to instant response systems.

Examples include: <http://www.polleverywhere.com/> and <http://understoodit.com/>

Mind map

A mind map is a visualisation tool used to outline information. It is usually created around a central theme, which could be a word or text with associated ideas, words and concepts radiating from the central node. The concept is like tree with the central theme/word representing the trunk with branches emanating from the central hub. The branches and sub-branches represent the words, ideas or even tasks that are related to the central key word or idea. Mindmaps are a flexible tool to map tasks, understand situations and map problems and solutions. It can be hand-drawn and include images to denote words and ideas instead of text. Other terms for this diagramming tool are: “spider diagrams,” “spidergrams,” “spidergraphs,” “webs”, “mind webs”, or “webbing”, and “idea sun bursting”.

Triangulation (in social research; not to be confused with the mathematical concept)

The concept of triangulation encourages researchers to use more than one source to support their findings. The simple argument is that if numerous sources back your claim, then that claim is a more robust one. Triangulation is particularly effective when the broad bird’s eye approach of quantitative research is combined with the more detailed qualitative research to give a more thorough account. An example of this is when a researcher compares their survey results with a case study or interview; and when the views expressed from these different sources are consistent, this gives the researcher greater confidence.

Most significant change (MSC)

The most significant change (MSC) technique is a method for monitoring and evaluating complex interventions. Its main focus is identifying the improvements resulting from the training activity or service provision. The technique consists of 10 steps through which stakeholders search for significant outcomes and then deliberate on the value of these outcomes in a systematic and transparent manner. It is highly participatory approach and has at its core the generation, analysis and use of stories. The technique is also known as ‘monitoring without indicators’ and ‘the story approach’.

Needs assessment

Determining the current competency levels (including knowledge, skills, attitudes and values) of your trainees is known as understanding their needs (or needs assessment). Before you can design a training intervention it is important to understand what is currently known and identify unknowns. Methods for assessing needs could include interviews, focused discussions and needs analysis surveys or diagnostic tools. It is necessary step to understanding your training cohort and test your assumptions about their training needs.

Outcome Mapping (OM)

Outcome mapping was developed by International Development Research Centre (IDRC) in the late 1990s and has been championed by the Overseas Development institute. OM is a methodology for planning, monitoring and evaluation. It focuses on outcomes rather than outputs and acknowledges the limits to the training interventions influence. OM is people-focused and as

such sees outcomes as changes in people’s attitudes and behaviours as a result of engagement with the intervention. It can be used at the program, project and organisational levels.

Outcome Orientation

Outcome Orientation as an approach to planning, monitoring, evaluation and learning. This focuses on outcomes in terms of the changes in behaviour we would ‘expect, like or love to see’. This method is used to think about the kinds of changes you are trying to achieve through your information literacy activities as well as identifying observable changes in behaviour. Activities and interventions should be designed by asking “What will be different and for whom?” before asking, “What am I going to do?”

Observations

A technique involving the observation by trainers of trainees’ progress throughout the training intervention as an integral part of the teaching/learning process. This requires the systematic gathering and analysing of evidence which enables trainers to reach a well-founded view about training outcomes and needs. ‘Promenading’, i.e. where the trainer tours the learning environment, provides a quick way to identify where individuals are experiencing problems.

Quizzes

A variant of questionnaires, typically used in classroom situations, allowing for immediate responses to questions posed in an informal and engaging way. Quizzes tend to rely on high levels of interactivity. Quick quizzes help learners to stay focused and engaged.

Photo-stories

Photo-stories are an engaging and creative way to visualise narrative and communicate what has been learned, or report on, a training intervention.

Randomised control trials (RCTs)

An RCT is an example of a quantitative method where two control groups are created to detect the efficacy of a given intervention. For instance, in a training intervention two control groups would be created with one group receiving no intervention at all, and the other receiving the new, or alternative, intervention. The data gathered from both interventions would be compared at the end to detect whether the intervention was effective. RCTs offer a robust approach to testing the effectiveness of training intervention but require large numbers of participants in the intervention and control groups to be able to detect a difference and overcome challenges with ‘matching’ the sample.

Reflective tools, including diaries/journals

These allow learners, over a period of time, to record observations or impressions of their progress during the course of training, to self-evaluate this and to draw conclusions that will enable them to improve their performance. Reflective tools thus act as a means for individuals to assess what and how well they have learnt as a result of training initiatives and how they might apply this, following the initiatives, in their respective environments. Reflective tools capture changes in thinking and attitudes. They may include daily timelines, blogs (and micro blogs, such as twitter), email diaries or other forms of journaling.

Spider tool (see also Evaluation Wheel or Mind Maps)

Storytelling

This allows training recipients to provide a narrative of their experiences in applying newly-acquired knowledge and skills. It is an opportunity for individuals to set out, in their own words, what it is that they do as a result of having received training. It can be a useful way of gauging their understanding and the impact of the initiative. It can also serve as a reflective tool.

Surveys/questionnaires

Surveys and questionnaires may form an integral part of diagnostic testing, but they may also be used as a means of obtaining trainees' immediate feedback and opinions on training. These may range from extensive, in depth surveys which have been developed and validated elsewhere, or something as simple as learners placing comments or ticks against a smiley face, a non-committal face or a negative face on a sheet of paper when leaving the training venue. Surveys may be conducted face to face, online (e.g. using a tool such as SurveyMonkey, via SMS, or by telephone.

Theory of Change (TOC)

A TOC is a tool that can help you clearly articulate the long-term changes of your training intervention at an organisational, programme or project-level. TOCs are normally articulated in a diagrammatic form although they are flexible in style, format and content. They show how change happens in relation to focus themes and demonstrate the pathways the organisation proposes to take to address these themes.

T-Tests

A t-test is a statistical test that allows you to measure whether data gathered is significant. It can be used to validate scores in test surveys or questionnaires where trainees have self-reported changes in their competency levels, in particular when validating pre-training and post-training assessments. You can perform a t-test using statistical software like Microsoft Excel.

Usage statistics and Web logs

Quantitative data that demonstrates the take-up or usage by training recipients, following training initiatives, of particular resources, such as online catalogues, bibliographic services and indexes. They can also provide data on the use of specific commands in retrieval systems and the material that is used or downloaded.



Appendix 2: M&E tools by stage

IL Standards, Models and Frameworks

- Australian and New Zealand Information Literacy Framework, principles, standards and practice, A Bundy <http://www.library.unisa.edu.au/learn/infolit/Infolit-2nd-edition.pdf> (Last accessed 23 Feb 2013)
- CAUL – International resources in information literacy <http://www.caul.edu.au/caul-programs/information-literacy/information-literacy-resources/international-resources> (Last accessed 23 Feb 2013)
- Information Literacy Standards (Various) – Association of College and Research Libraries: <http://www.ala.org/acrl/standards> (Last accessed 23 Feb 2013)
- IL Standards, Models and Frameworks – Sheila Webber's Blog, Information Literacy Weblog <http://information-literacy.blogspot.co.uk/> (Last accessed 23 Feb 2013)
- LAMP – Literacy Assessment and monitoring programme <http://www.uis.unesco.org/literacy/Pages/lamp-literacy-assessment.aspx> (Last accessed 23 Feb 2013)
- OECD's PISA (Programme for International Student Assessment) <http://www.oecd.org/edu/school/programmeforinternationalstudentassessmentpisa/> (Last accessed 23 Feb 2013)
- Project SAILS - <https://www.projectsails.org/> (Last accessed 23 Feb 2013)
- The SCONUL Seven Pillars of Information Literacy (Core Model for Higher Education) <http://www.sconul.ac.uk/sites/default/files/documents/coremodel.pdf> (Last accessed 23 Feb 2013)
- 'The big blue – information skills for students' – Final report, JISC, <http://www.jisc.ac.uk/media/documents/programmes/jos/bigbluefinalreport.pdf> (Last accessed 23 Feb 2013)
- 'Towards information literacy indicators', a conceptual framework, R Catts and J Lau. http://www.ifla.org/files/assets/information-literacy/publications/towards-information-literacy_2008-en.pdf (Last accessed 23 Feb 2013)

M&E in Action

- Appreciative inquiry: <http://blogs.ubc.ca/evaluation/files/2009/02/appreciative20inquiry.pdf> (Last accessed 23 Feb 2013)
- Contribution analysis: <https://communities.usaidallnet.gov/fa/system/files/Contribution+Analysis+-+A+New+Approach+to+Evaluation+in+International+Development.PDF> (Last accessed 23 Feb 2013)
- Outcome harvesting: <http://www.outcomemapping.ca/download.php?file=/resource/files/Outcome%20Harvesting%20Brief%20FINAL%202012-05-2-1.pdf> (Last accessed 23 Feb 2013)
- Outcome mapping: <http://www.outcomemapping.ca/resource/resource.php?id=342> and <http://vimeo.com/38146769> (Last accessed 23 Feb 2013)
- Participatory action research: <http://www.web.ca/robrien/papers/arfinal.html> (Last accessed 23 Feb 2013)
- Participatory evaluation: <http://www.gsdr.org/docs/open/EIRS4.pdf> (Last accessed 23 Feb 2013)
- Results based evaluation: <http://www.oecd.org/derec/worldbankgroup/35281194.pdf> (Last accessed 26 July 2013)
- Rights-based evaluation/equity based evaluation: <http://mande.co.uk/> (Last accessed 27 July 2013)
- SROI (social return on investment): <http://www.thesroinetwork.org/publications> (Last accessed 23 Feb 2013)

Stage 1: Assessing needs

- Developing effective questionnaires and surveys: Roddy, K. (2006). *Creating effective questionnaires and surveys and analysing the data*. Available: <http://www2.lse.ac.uk/library/versions/Creating%20effective%20questionnaires%20and%20surveys.pdf> (Last accessed 23 Feb 2013)
- Grounded theory: <http://www.methods.manchester.ac.uk/events/whatis/gt.pdf> (Last accessed 23 Feb 2013)
And <http://www.groundedtheoryonline.com/what-is-grounded-theory> (Last accessed 23 Feb 2013)
- IDRC resources on Outcome mapping: <http://www.idrc.ca/EN/Resources/Publications/Pages/ArticleDetails.aspx?PublicationID=1004> (Last accessed 23 Feb 2013)
- iSkills: <http://www.ets.org/iskills/about> (Last accessed 23 Feb 2013)
- Outcome mapping community <http://www.outcomemapping.ca> (Last accessed 23 Feb 2013)
- Project SAILS: <https://www.projectsails.org/> (Last accessed 23 Feb 2013)
- Stakeholder Analysis: ODI. (Jan, 2009). *Planning Tools: Stakeholder Analysis*. Available: <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/6459.pdf> (Last accessed 05 Feb 2013)
- SurveyMonkey. A free online survey tools useful for needs analysis surveys (www.surveymonkey.com)

Stage 2: Programme strategy and objectives

Logical Frameworks

- A guide to logframes produced by DFID www.dfid.gov.uk/Documents/publications1/how-to-guid-rev-log-fmwk.pdf (Last accessed 23 Feb 2013)
- An example of a Theory of Change for information literacy training http://www.shf.ac.uk/content/1/c6/11/08/47/CILASS_ToC.pdf (Last accessed 23 Feb 2013)
- Another set of Theory of Change resources <http://onthinktanks.org/2011/05/18/theories-of-change/> (Last accessed 23 Feb 2013)
- A set of resources that discuss Theories of Change <http://www.researchtoaction.org/2011/05/theory-of-change-useful-resources> (Last accessed 23 Feb 2013)
- BOND. (2003). Logical Framework Analysis. <http://www.gdrc.org/ngo/logical-fa.pdf> (Last accessed 23 Feb 2013)
- Project “Superwoman” Theory of Change: <http://www.theoryofchange.org/what-is-theory-of-change/how-does-theory-of-change-work/example/#3> (Last accessed 23/2/13) Theory of change.org (www.theoryofchange.org) (Last accessed 23 Feb 2013)

Theory of Change

- Theory of Change, What’s it all about? <http://www.capacity.org/capacity/export/sites/capacity/documents/topic-readings/ONTRAC-51-Theory-of-Change.pdf> (Last accessed 23 Feb 2013)

Stage 3: Identifying challenges

- Information from the UK Government national archives on carrying out stakeholder analyses, http://webarchive.nationalarchives.gov.uk/20120118164404/hcai.dh.gov.uk/files/2011/03/Presentation_Stakeholder_engagement_FINAL_071210.pdf (Last accessed 23 Feb 2013)
- Information from ODI on stakeholder analyses www.odi.org.uk/rapid/tools/toolkits/Policy_Impact/Stakeholder_analysis.html (Last accessed 23 Feb 2013)
- Problem Trees <http://www.odi.org.uk/publications/5258-problem-tree-analysis> (Last accessed 23 Feb 2013)
- Problem and Objective tree analysis (ODI) http://www.cpc.unc.edu/measure/training/materials/basic-me-concepts-portuguese/problem_tree.pdf (Last accessed 23 Feb 2013)



Stage 4: Designing your M&E

Qualitative methods

- Bulletin boards, online discussion forums, blogs, wikis: <http://www.qualitativemind.com/using-bulletin-boards/> (Last accessed 23 Feb 2013)
- Consensus workshops: <http://oqi.wisc.edu/resourcelibrary/uploads/resources/Consensus%20Workshop%20-%20Description.pdf> (Last accessed 23 Feb 2013)
- Delphi process: <http://www.uwex.edu/ces/pdande/resources/pdf/Tipsheet4.pdf> and <http://pareonline.net/pdf/v12n10.pdf> and <http://www.aral.com.au/resources/delphi.html> (Last accessed 23 Feb 2013)
- Drama, puppetry : <http://www.hapinternational.org/pool/files/wvuk-puppets-for-accountability.pdf> (Last accessed 23 Feb 2013)
- Drawings: http://www.unicef-irc.org/publications/pdf/iwp_2009_05.pdf (Last accessed 23 Feb 2013)
- Focus groups: http://www.infed.org/research/focus_groups.htm or <http://sru.soc.surrey.ac.uk/SRU19.html> (Last accessed 23 Feb 2013)
- Graphical facilitation : <http://aea365.org/blog/?tag=graphic-facilitation> and <http://www.blog.biggerpicture.dk/learn-graphic-facilitation-snippet-learning/>
- Interviews (face to face): <http://www.fao.org/docrep/w3241e/w3241e06.htm> (Last accessed 23 Feb 2013)
- Interviews (key informant): <http://pdf.usaid.gov/pdf/docs/PNABS541.pdf> (Last accessed 23 Feb 2013)
- Interviews (virtual): <http://www.qualitative-research.net/index.php/fqs/article/view/175/391> and <http://blog.vision2lead.com/e-interviews-2/about-e-interviews/> (Last accessed 23 Feb 2013)
- Mind-mapping : <http://portals.wi.wur.nl/msp/?page=1232> and <http://ncrcrd.msu.edu/uploads/files/133/Mapping%20Impact%20of%20Youth%20on%20Com%20Dev%2012-3-10.pdf> (Last accessed 23 Feb 2013)
- Most significant change (MSC): <http://www.mande.co.uk/docs/MSCGuide.pdf> (Last accessed 23 Feb 2013)
- Observations : <http://learningstore.uwex.edu/assets/pdfs/G3658-5.PDF> and <http://transition.usaid.gov/policy/evalweb/documents/TIPS-UsingDirectObservationTechniques.pdf> and <http://www.taklin.com> and <http://www.noldus.com/human-behavior-research> (Last accessed 23 Feb 2013)
- Participant observation (=ethnography): http://www.unicef-irc.org/publications/pdf/iwp_2009_05.pdf (Last accessed 23 Feb 2013)
- Photography : <http://www.socialsciences.manchester.ac.uk/morgancentre/realities/toolkits/participatory-visual/17-toolkit-participatory-visual-methods.pdf> and <http://www.photovoice.org/html/ppforadvocacy/ppforadvocacy.pdf> and http://www.unicef-irc.org/publications/pdf/iwp_2009_05.pdf (Last accessed 23 Feb 2013)
- Photostories : <http://kdid.org/sites/kdid/files/CBAA%20PHOTOSTORY.pdf> (Last accessed 23 Feb 2013)
- Qualitative research : http://resources.civilservice.gov.uk/wp-content/uploads/2011/09/a_quality_framework_tcm6-7314.pdf (Last accessed 23 Feb 2013)
- Reflective tools: Daily timelines : http://www.unicef-irc.org/publications/pdf/iwp_2009_05.pdf (Last accessed 23 Feb 2013)
- Reflective tools: Diaries/journals : <http://sru.soc.surrey.ac.uk/SRU2.html> and <http://punchcut.com/perspectives/uncovering-context-mobile-diary-studies> (Last accessed 23 Feb 2013)
- Reflective tools: Diaries (blog): <http://www.dubstudios.com/technology/using-blog-tools-for-research-and-innovation/> and <http://www.dubstudios.com/mr/digital-diaries-as-an-online-qual-methodology/> (Last accessed 23 Feb 2013)
- Reflective tools: Diaries (email): <http://sru.soc.surrey.ac.uk/SRU21.html> (Last accessed 23 Feb 2013)
- Reflective tools: Diaries (virtual): <https://www.scss.tcd.ie/Gavin.Doherty/mood-charting-preprint.pdf> and <http://www.jopm.org/columns/innovations/2011/09/26/just-text-me-using-sms-technology-for-collaborative-patient-mood-charting/> (Last accessed 23 Feb 2013)
- Spider tool (see also Evaluation Wheel): http://www.ungei.org/resources/files/SCS_Spider_Tool_Final_2.pdf and http://www.crin.org/docs/resources/publications/SCS_Spider_Tool_Facilitators_Guide_3.pdf (Last accessed 23 Feb 2013)

- Storytelling http://www.heacademy.ac.uk/assets/documents/resources/resourcedatabase/id473_valuation_through_storytelling.pdf (Last accessed 23 Feb 2013)
- Video : <http://insightshare.org/watch/video/insights-pv-short> and <http://www.socialsciences.manchester.ac.uk/morgancentre/realities/toolkits/participant-produced-video/2008-07-toolkit-camcorders.pdf> (Last accessed 23 Feb 2013)

Quantitative methods

- Diagnostic tests (pre & post): http://infolitglobal.net/directory/en/browse/category/products/assessment_tools (Last accessed 23 Feb 2013)
- Evaluation wheel (also known as Spider Tool): <http://portals.wi.wur.nl/msp/?page=1222> (Last accessed 23 Feb 2013)
- Instant response techniques/keypad technology/live polling : <http://ncdd.org/rc/item/3601> and <http://www.educause.edu/ero/article/clickers-and-cats-using-learner-response-systems-formative-assessments-classroom> (Last accessed 23 Feb 2013)
- Mobile data collection : <http://understoodit.com/> (Last accessed 23 Feb 2013)
- Quizzes : <http://infoskills.uelconnect.org.uk/> (Last accessed 26 July 2013)
- Randomised control trials: http://www.entwicklung.at/uploads/media/Designing_Impact_Evaluation_Robert_Chambers.pdf (Last accessed 23 Feb 2013)

- Surveys (CAPI): <http://blogs.worldbank.org/impacitevaluations/paper-or-plastic-part-ii-approaching-the-survey-revolution-with-caution> (Last accessed 23 Feb 2013)
- Surveys (general): <http://learningstore.uwex.edu/assets/pdfs/G3658-10.PDF> (Last accessed 23 Feb 2013)
- Surveys (online): <https://www.projectsails.org/> (Last accessed 23 Feb 2013)
- Text analysis: linguistic inquiry and word count: <http://aea365.org/blog/?cat=231> (Last accessed 23 Feb 2013)
- Usage statistics/weblogs: <http://www.amicalnet.org/meetings/2012/presentations/evaluating-information-literacy-conjunction-overall-services-usage> (Last accessed 23 Feb 2013)

Hybrid methods

- Outcome stars (branded – see also Spider Tool): <http://www.outcomesstar.org.uk/> (Last accessed 23 Feb 2013)
- Sensemaking : <http://www.globalgiving.org/story-tools/> and <http://chewychunks.files.wordpress.com/2012/05/storytelling-realbook-may-23-2012.pdf> and http://www.ssireview.org/articles/entry/amplifying_local_voices1/ (Last accessed 23 Feb 2013)
- Social network analysis : <http://www.adb.org/Documents/Information/Knowledge-Solutions/Social-Network-Analysis.pdf> and <http://mande.co.uk/2008/lists/social-network-analysis-and-evaluation-a-list/> and <http://www.kstoolkit.org/Social+Network+Analysis> and <http://netmap.wordpress.com/about/> and <http://www.kstoolkit.org/Social+Network+Analysis> (Last accessed 23 Feb 2013)

Additional resources

- Mixed methods : <http://www.gsdr.org/docs/open/EIRS4.pdf> (Last accessed 17 July 2013)
- Journal of Multidisciplinary Evaluation (JMDU): http://journals.sfu.ca/jmde/index.php/jmde_1 (Last accessed 17 July 2013)

Stage 5: Establishing a baseline

- Lickert Scale: <http://www.surveymonkey.com/mp/likert-scale/> (Last accessed 23 Feb 2013)



Stage 6: M&E during and immediately after training

- Information on questioning techniques: www.mindtools.com/pages/article/newTMC_88.htm and <http://blog.readytomanage.com/examples-of-probing-interview-questions/> (Last accessed 23 Feb 2013)
- Information on understoodit, a method of real-time assessment <http://understoodit.com/> (Last accessed 23 Feb 2013)
- Information on the focused-conversation method <http://fnsingapore.blogspot.com/2008/08/focused-conversation-method.html> (Last accessed 23 Feb 2013)
- Information about the iclicker classroom response system: <http://www.iclicker.com/> (Last accessed 23 Feb 2013)
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Stage 7: Data Analysis

Analysing quantitative data

- A short, beginner's guide to descriptive statistics, <http://learningstore.uwex.edu/Assets/pdfs/G3658-06.pdf> (Last accessed 23 Feb 2013)
- A thorough and free overview of descriptive and inferential statistics, <http://www.statsoft.com/textbook/> (Last accessed 23 Feb 2013)
- Essential reading on descriptive and inferential statistics: Woolf, L.M *Introduction to Measurement and Statistics* <http://www.webster.edu/~woolfilm/statwhatis.html> (Last accessed 23 Feb 2013)
- Using Microsoft Excel to enter survey and run some simple descriptive statistics <http://learningstore.uwex.edu/Assets/pdfs/G3658-14.pdf> (Last accessed 23 Feb 2013)

Analysing qualitative data

- Analysing focus group data: www.utexas.edu/academic/ctl/assessment/iar/programs/report/focus-Analysis.php (Last accessed 23 Feb 2013)
- Excellent overview of how to maintain quality, transparency and credibility in qualitative data analysis. *Spencer, L., Ritchie, J., Lewis, J. and Dillon, L. (2003). *Quality in Qualitative Evaluation: A framework for assessing research evidence*. UK Cabinet Office Strategy Unit
- Ragin, C., Nagel, J. and White, P. (2004). *General Guidance for Developing Qualitative Research Projects & Recommendations for Designing, Evaluating, and Strengthening Qualitative Research in the Social Sciences*. National Science Foundation Workshop on Scientific Foundations of Qualitative Research

- Thematic coding video tutorial: http://www.youtube.com/watch?v=B_YXR9kp1_o (Last accessed 23 Feb 2013). *Workshop report on scientific foundations of qualitative research*: <http://www.nsf.gov/pubs/2004/nsf04219/nsf04219.pdf> (Last accessed 23 Feb 2013)
- Video tutorial from Graham H Gibbs (2010) (from 2:20mins onwards) <http://learningstore.uwex.edu/Assets/pdfs/G3658-12.pdf> (Last accessed 23 Feb 2013)
- Collecting observational data : <http://learningstore.uwex.edu/Assets/pdfs/G3658-05.pdf> (Last accessed 23 Feb 2013)

Choosing qualitative data analysis software

- Lewins, A. & Silver, C. *Choosing CAQDAS (Computer Assisted Qualitative Data Analysis Software) (2004)* <http://www.surrey.ac.uk/sociology/research/researchcentres/caqdas/> (Last accessed 26 July 2013)
- WeftQDA (free opensource software) <http://www.pressure.to/qda/> (Last accessed 23 Feb 2013)
- What is qualitative data? http://onlineqda.hud.ac.uk/Intro_QDA/what_is_qda.php (Last accessed 23 Feb 2013) and <http://hsc.uwe.ac.uk/dataanalysis/qualWhat.asp> (Last accessed 23 Feb 2013)
- Data cleaning: <http://www.uwex.edu/ces/pdande/resources/pdf/Tipsheet22.pdf> (Last accessed 23 Feb 2013)
- Distance travelled Roddy, K. (2011). *Measuring Outcomes and Impact*.

Sample-size calculators:

- <http://www.surveysystem.com/sscalc.htm> (Last accessed 23 Feb 2013)
- <http://www.raosoft.com/samplesize.html> (Last accessed 23 Feb 2013)
- <http://stat.ubc.ca/rollin/stats/ssize/index.html> (Last accessed 23 Feb 2013)
- http://www.worldbank.org/oed/ipdet/modules/M_11-na.pdf (Last accessed 23 Feb 2013)

Stage 8: Learning from your M&E

General resources on learning from evaluations:

- A broader view of how to ensure that learning is built into evaluation design: Kusters, C., van Vught, S., Wigboldus, S., Williams, B. & Woodhill, J. (2011). Making evaluations matter: A practical guide for evaluators. Centre for Development Innovation, Wageningen University & Research centre, Wageningen, The Netherlands. www.cdi.wur.nl (Last accessed 23 Feb 2013)
- An excellent conceptual overview of organisational learning in NGOs: Britton, B. (2005). Organisational Learning in NGOs. INTRAC. <http://www.intrac.org/data/files/resources/398/Praxis-Paper-3-Organisational-Learning-in-NGOs.pdf> (Last accessed 23 Feb 2013)
- The barefoot guide to learning practices in organisations and social change: <http://www.barefootguide.org/index.php/download/the-barefoot-guide-2/item/the-barefoot-guide-2-learning-practices-in-organisations-and-social-change> (Last accessed 23 Feb 2013)
- Documenting learning: Lederach, J.P., Neufeldt, R., & Culbertson, H. (2007). Reflective Peacebuilding: A planning, learning and evaluation toolkit or documenting and communicating learning. The Joan B. Kroc Institute for International Peace Studies, University of Notre Dame & Catholic Relief Services. http://kroc.nd.edu/sites/default/files/reflective_peacebuilding.pdf (Last accessed 23 Feb 2013)

- Facilitation skills and tools: 'DFID Tools for Development'. <http://webarchive.nationalarchives.gov.uk/+http://www.dfid.gov.uk/Documents/publications/toolsfordevelopment.pdf> (Last accessed 23 Feb 2013)

Energisers, ice-breakers and other tips and tools for facilitated events

- Brainstorming: <http://brainstorming.co.uk> (Last accessed 23 Feb 2013)
- Facilitation tips: <http://www.thiagi.com/tips.html> (Last accessed 23 Feb 2013)
- International HIV/AIDS Alliance (2002). 100 ways to energise groups. http://www.aidsalliance.org/includes/Publication/ene0502_Energiser_guide_eng.pdf (Last accessed 23 Feb 2013)
- UNICEF. Games and Exercises: A manual for facilitators and trainers involved in participatory group events. http://www.click4it.org/images/5/55/Visualisation_in_Participatory_Programmes_-_Games_and_Exercises.pdf (Last accessed 23 Feb 2013)

Divergent thinking/creativity

- 192 creativity techniques: http://www.mycoted.com/Category:Creativity_Techniques (Last accessed 23 Feb 2013)
- *Participatory events: New Economics Foundation (1998). Participation Works! 21 techniques of community participation for the 21st century.* <http://www.neweconomics.org/publications/participation-works> (Last accessed 23 Feb 2013)
- Tools for knowledge and learning: http://www.dochas.ie/pages/resources/documents/ODI_KM_toolkit.pdf (Last accessed 23 Feb 2013)

Stage 9: Communicating your findings

Creating a communications strategy

- CRS – Guidelines on designing an evaluation reporting and communication strategy: Stetson, V. (Sept, 2008). *Monitoring & Evaluation: Short Cuts, Guidelines on designing an evaluation reporting and communication strategy*. Available: http://www.crsprogramquality.org/storage/pubs/me/MEshortcut_communicating.pdf (Last accessed 07 Feb 2013)
- ODI toolkit: Hovland, I. (Oct, 2005). *Successful Communication, A Toolkit for Researchers and Civil Society Organisations*. Available: <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/192.pdf> (Last accessed 07 Feb 2013)

Quantitative visualisation

- Cartoons and Stories on Research, Evaluation and Technology. Freshspectrum. (2013). *Data Viz Resources*. Available: <http://freshspectrum.com/dataviz/> (Last accessed 23 Feb 2013)
- Data visualisation using Excel: VizWise. (2011). *Data Visualisation for Excel*. Available:
- Duggirala, P. (2013). *Excel tutorials, tips and downloads*. Available: <http://chandoo.org/wp/> (Last accessed 07 Feb 2013)
- Excel training tutorials online: <http://www.excelcharts.com/blog/> (Last accessed 07 Feb 2013)
- OSCL. (2009). *Examples, Gallery*. Available: <http://www.improving-visualisation.org/visuals> (Last accessed 23 Feb 2013)

- Tableau Software. (2013). *Homepage*. Available: <http://www.tableausoftware.com/public> (Last accessed 07 Feb 2013)
- Using graphics to report evaluation results: Minter, E; Michaud, M. (2003). *Using graphics to report evaluation results*. Available: <http://learningstore.uwex.edu/Assets/pdfs/G3658-13.pdf> (Last accessed 07 Feb 2013)

Qualitative visualisation

- Analyse and explore data using the Many Eyes tools developed by IBM Research
- IBM Research, Visual Communication Lab. (2007). *Tour*. Available: <http://www-958.ibm.com/software/data/cognos/manyeyes/page/Tour.html> (Last accessed 23 Feb 2013)
- Think with your eyes: considerations when visualising information: Mitchell, J; Rands, M; RISE. (2001). *Think with your eyes*. Available: <http://www.rise.hs.iastate.edu/documents/VisualizingInformation.pdf> (Last accessed 23 Feb 2013)
- Word clouds: www.wordle.net (Last accessed 23 Feb 2013)

Tools

- Prezi: www.prezi.com (Last accessed 23 Feb 2013)
- Tableau Public: <http://www.tableausoftware.com/public/> (Last accessed 23 Feb 2013)
- Microsoft Live Movie Maker <http://windows.microsoft.com/en-GB/windows/get-movie-maker-download> (Last accessed 23 Feb 2013)



Appendix 3: Suggested criteria for describing good practice in monitoring and evaluation

This document explains briefly how to contribute your experiences to the toolkit. These could be instances of good practice from your own experience of undertaking monitoring and evaluation of your information literacy intervention (or another capacity building programme).

Set out below is a suggested short set of criteria which can act as a checklist and a guide towards describing your good practice. It applies to all information literacy training interventions and will be used as criteria for mapping your experiences to the nine stages identified in this toolkit. We welcome all examples of best practice and only ask that you inform us of the location where the intervention took place. The criteria are articulated around a series of practical questions that all trainers should be in a position to address without too much difficulty.

Definitions:

- Define the scope of the training intervention – also include information on where and when training will take place.
- What is the purpose of the intervention?
- What form of monitoring and evaluation are you describing (please refer to the different stages in this toolkit).
- Who will attend the intervention?
- What support is required to run the intervention (personnel, facilities, financial)?

Description and scope: this essentially describes the monitoring and evaluation approach, method or tool.

- Describe the monitoring and evaluation approach, method or tools you will be using. Try to be specific about why you chose this particular approach.
- Tell us about any innovations or creative applications that you devised when applying this approach, method or tool.
- What did the monitoring and evaluation approach, method or tool tell you? For instance, did it help you strategically plan or determine your objectives.
- Are there any general or specific; practical or theoretical issues that need to be considered?
- What did you do with the data gathered?
- How will it help you to communicate the impact of your training intervention?

When you are ready please forward your case study to the BLDS / IDS email inbox: blds@ids.ac.uk Include the term: M&E toolkit in the subject line.



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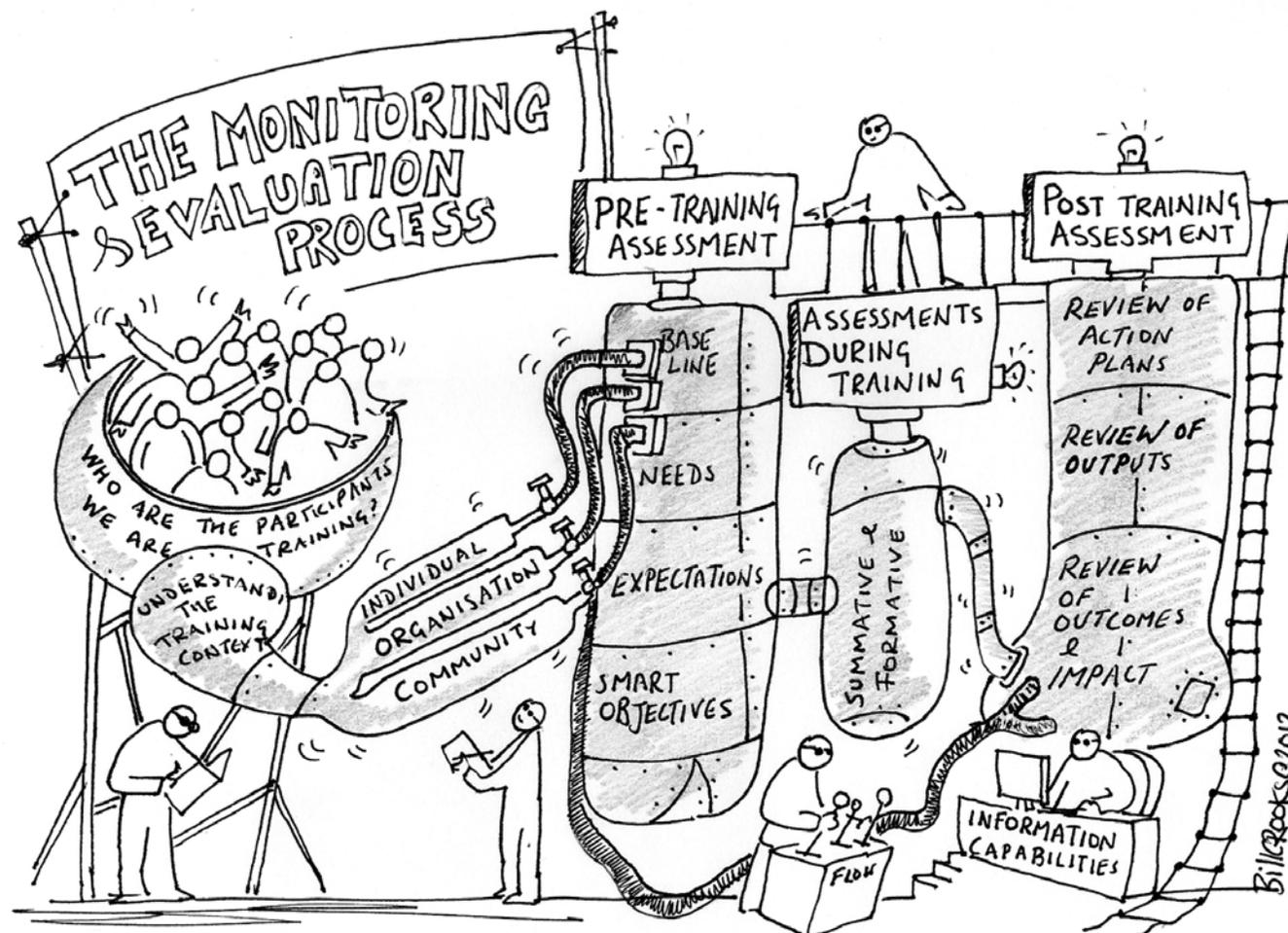
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