



# STIR EDUCATION UGANDA

ENHANCING DATA MANAGEMENT CAPACITIES FOR  
UGANDAN EDUCATION LEADERS

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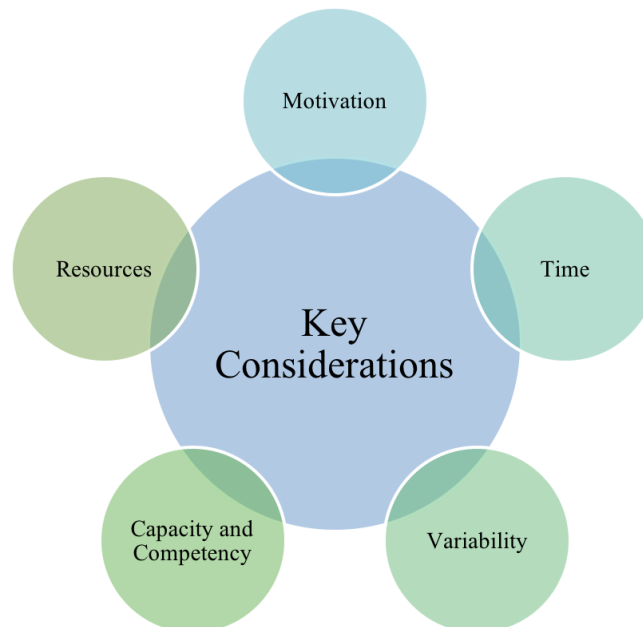
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## PREFACE

This training manual is designed by the Humphrey School of Public Affairs Capstone Team in conjunction with STIR Education Uganda to assist their efforts in enhancing data management and action planning capacities for Education Leaders (EL) participating in the Learning Improvement Cycle program. This training manual is motivated by the participants' eagerness to build their data management skills to make more informed decisions that improve academic performance in their respective districts. Additionally, data management skills are transferable to other government functions. The envisioned outcome of these training sessions are more empowered and motivated participants who can use data to drive academic improvement.

Drawing from training examples in various sectors, this training manual was designed to offer flexibility for trainers to custom design sessions according to the context of Ugandan school districts. Based on our meetings with STIR Uganda, and findings from a review of data management literature, our analysis of the STIR Uganda data management structure and current practice revealed 5 Key Considerations (Figure 1) which is the foundation supporting the design of this manual and the activities therein. This tool is useful for training design teams, and can be used as an exercise to thoroughly design activities that consider participants' challenges and motives, and resource and time constraints facing STIR Education Uganda.

**Figure 1: Five Key Considerations**



When designing data management training activities...

- **Motivation:** Will the participants be motivated to practice these concepts in their respective districts? Will the training boost their intrinsic motivation as education leaders?
- **Time:** Are the data management training activities time efficient? Will they compete for time with other training priorities?
- **Variability:** Given that the number of participants differs between districts, will the training activities accommodate various group sizes?
- **Capacity and Competency:** Are the training objectives and activities understandable by all participants? Is the training message targeted and impressionable?
- **Resources:** Will these activities fit within the resource budget? Can the activities be substantive and resource efficient?

## HOW TO USE THIS MANUAL

This manual is meant as a guide from which training managers can either take practical activities to insert in training agendas, or draw from our guiding framework and synthesis to design their own. The 5 Key Considerations and the Synthesis are tools to help guide the design of future training activities. We understand that the training context shifts from each district, and that there is a great chance of variability. Therefore, we want to provide STIR with a practical resource that allows for the necessary flexibility in trainings. Furthermore, the loose structure of this manual allows for STIR to insert its own activities as the Humphrey Capstone Team may not have full insight into STIR's complete registry of activities and tools.

Following the overview of the 5 Key Considerations mentioned in the preface is the Synthesis (Figure 2) which captures the essential elements of data management trainings at large. Our analysis of existing training manuals in addition to STIR Uganda's training practices, suggest that most impactful data management trainings contain the objectives outlined in the Synthesis.

The data management curriculum is categorized into four distinct stages, which outline a linear progression of learning from defining purpose and value behind actions, to utilizing data to drive institutional improvement in the form of action plan. The fourth stage is the evaluative component for trainers to identify areas of strength and improvement. Within each stage are steps and objectives which, upon achievement, effectively prepare the participants for the subsequent activities and objectives. For example, before designing action plans (Stage C), the participants must know how to analyze the data and communicate insights effectively (Stage B).

SYNTHESIS OF DATA MANAGEMENT				
Stage	Step	Objectives	Aspects to Ascertain	Toolbox
A. Pre-Data Management	1. Clarity of Purpose	<ul style="list-style-type: none"> <li>- Identify the value/purpose of data to their institution(s) and the participant's role in collecting them.</li> <li>- Identify what is to be achieved by the training sessions (i.e. hopeful outcomes of training).</li> <li>- Understand how this training can help improve their respective functions.</li> </ul>	<ul style="list-style-type: none"> <li>- Position</li> <li>- Motivation</li> <li>- Opportunity Cost</li> </ul>	Act.1
	2. Data Flow	<ul style="list-style-type: none"> <li>- Know what the data source is and understand the role of the main actors in the System-Led Model.</li> <li>- Understand the main components of the data system and how these relate to each other.</li> <li>- Know the characteristics of the data.</li> </ul>	<ul style="list-style-type: none"> <li>- Existing data</li> <li>- Data use/ purpose</li> </ul>	Act. 2, 3
B. Data Management	3. Data Collection Methods and Quality	<ul style="list-style-type: none"> <li>- Collect data that satisfy high quality data standards.</li> <li>- Identify and utilize effective methods of data collection.</li> </ul>	<ul style="list-style-type: none"> <li>- Anticipate common/previous questions</li> <li>- Required materials</li> <li>- Resource constraints and differences</li> <li>-Data Quality</li> </ul>	Act. 4, 5
	4. Analyzing	<ul style="list-style-type: none"> <li>- Interpret the main trends in their data source(s).</li> <li>- Communicate the results of the data analysis.</li> <li>- Judge the performance of their respective institutions.</li> <li>- Use the findings effectively to improve performance.</li> </ul>	<ul style="list-style-type: none"> <li>- Capacity/competency differences between participants.</li> </ul>	Act. 6, 7
C. Action Plan	5. Identifying Opportunities	<ul style="list-style-type: none"> <li>- Identify opportunities for (1) Making Improvements, (2) Sharing knowledge, and (3) Celebrating Success.</li> <li>- Create allies and identify key stakeholders who can assist in their efforts.</li> </ul>	<ul style="list-style-type: none"> <li>- Participants' roles and responsibilities</li> <li>- Participants' training session outcomes.</li> <li>- Power dynamics</li> </ul>	Act. 8
	6. Taking Action	<ul style="list-style-type: none"> <li>- Design an action plan that is feasible, attainable, and measurable, and contributes to the improvement of their respective academic institutions.</li> <li>- Identify strategies to hold themselves accountable to their action plans.</li> </ul>	<ul style="list-style-type: none"> <li>- Accountability, follow-up measures.</li> </ul>	Act. 9
<b>D. Evaluation of Training</b> 1) Participants revisit motives and expectations, and assess changes in data management capacities, and 2) Trainers assess quality of training and identify successes, and areas for improvement. <sup>1</sup>				

<sup>1</sup> The design of this synthesis table is drawn from Alberto, R. et al. (2015) *Protocol for the Consular Care of Unaccompanied Migrant Children and Adolescents*. Mexico: Ministry of Foreign Affairs, General Directorate for the Protection of Mexicans Abroad.

## STAGE A. PRE-DATA-MANAGEMENT

### Key Considerations

- **Motivation:** Purpose and value will be attached to their involvement in data management trainings. The activities will not only boost their motivation to be more diligent with their data management practices, but also increase their engagement by sharing their own experiences and telling their own stories regarding data management.
  - Participants will be able to explore their motivations to participate in the training as well as their expectations. Also, they will brainstorm ideas about challenges regarding data management they currently face in their schools or districts.
- **Time:** The activities are designed to meet the requirements of time and limited resources available for the training.
- **Variability:** The activities of this stage take into account different sizes of groups taking the training so the facilitator will have the flexibility to choose the most convenient activity.
- **Capacity and Competency:** The activities level the field for participants with different backgrounds, work positions, and skills. Participants will find common ground by sharing their personal experiences.
- **Resources:** This activities require basic resources to achieve their objectives.


### STEP 1: CLARITY OF PURPOSE

Prior to any data management practice sessions, participants firmly understand their role and responsibility within the flow of academic data and within their respective institutions. Additionally, data travels often and across several actors, therefore the goal of Step 1 is to ensure that data management practices are performed with a deeper understanding of their function and purpose, and does not become a rote activity. Given the trainings are voluntary, opportunity cost and motivation to attend these trainings are important factors in the training design. A key priority is to highlight benefits to participants and relate the training outputs to their respective functions.

*Objectives. Participants should be able to...*

1. Identify the value/purpose of data to their institution(s) and the participant's role in collecting them.
2. Identify what is to be achieved by the training sessions (i.e. hopeful outcomes of training).
3. Understand how this training can help improve their respective functions.

## STAGE A.1 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 1. HOPES AND CHALLENGES</b>			
<p>The purpose of this activity is to have participants:</p> <ol style="list-style-type: none"> <li>1) Explore their internal aspirations and expectations of the training,</li> <li>2) Begin to brainstorm Data Management challenges in their respective districts, and</li> <li>3) Build a sense of community and ally network in tackling similar challenges and uniting through their hopes and expectations.</li> </ol> <p>The facilitator/participant ratio for this activity will be 1:25.</p>			
<b>Steps</b>	<b>Time (~15 mins)</b>	<b>Group Setting</b>	<b>Materials</b>
<p>1. As participants arrive, participants write on two small pieces of paper:</p> <ul style="list-style-type: none"> <li>- Their hopes (what they would like to achieve upon completing the DM training), and</li> <li>- Their challenges (what are their site specific challenges regarding DM)</li> </ul>	As participants arrive	As participants arrive	Paper, writing utensils
<p>2. While the participants are taking their seats, STIR staff will read through the responses.</p>	-	Entire group	-
<p>3. As a leading activity, the STIR staff will read to the entire group the Challenges first, and ask participants to raise their hands if they share the same experiences.</p>	2 min	Entire group	-
<p>4. Similarly, STIR staff will read through the Hopes responses and repeat the same procedure.</p>	2 min	Entire group	-
<p>5. Have participants turn to their right/left and have them discuss their hopes and challenges</p>	5 min	Pairs	-

regarding data management.			
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**Facilitator Talking Points**

- Have group look around the room and recognize peers who have similar hopes and challenges. Your peers can be excellent resources.
- Throughout training, participants will actively relate the training modules to their hopes and challenges.

**Additional Suggestions**

- If using post-its, the responses can be displayed on a wall surface, or a flip chart for viewing.
- Depending on group size, participants can write in their own notebooks and share in groups.

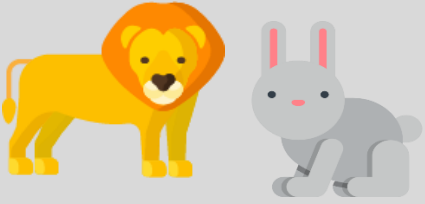
**STEP 2: DATA FLOW**

The data flow chart will be utilized to highlight the connection between data respective to the role of participants, where the data come from, how they are communicated and utilized. Additionally, this step suggests how a more complete data set can better inform decisions on improving their respective institutions.


- Objectives. Participants should be able to...*
1. Know what the data source is and understand the role of the main actors in the System-Led Model.
  2. Understand the main components of the data system and how these relate to each other.
  3. Know the characteristics of the data.



## STAGE A.2 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 2. THE LION AND THE RABBIT</b>			
<p>The objective of this activity to convey to participants the importance of information, and how having complete information can best inform their decision making. The facilitator/participant ratio for this activity will be 1/20.</p>			
<i>Steps</i>	<i>Time (25 min)</i>	<i>Group setting</i>	<i>Materials</i>
<p>1. Make participants pair up with the person next to them. Participants are given the instruction to solve a problem: A rabbit will be eaten by a lion who is on its way to catch it. What can the rabbit do to save its life? Then, share your solution with your pair.</p>	4 min	Pairs	Sheets of paper and pens.
<p>2. Participants are giving these data:</p> <ul style="list-style-type: none"> <li>- This is the fastest rabbit on earth, but can only run for 5 minutes at that speed.</li> <li>- There is a river not too far from where they are.</li> </ul> <p>Work individually, then share with your partner.</p>	4 min	Pairs	Sheets of paper and pens.
<p>3. Participants are giving more data:</p> <ul style="list-style-type: none"> <li>- The rabbit knows how to swim.</li> <li>- There is a cave close from where they are.</li> <li>- Work individually on your solution and share it with your pair.</li> </ul>	4 min	Pairs	Sheets of paper and pens.
<p>4. Participants are giving more data:</p> <ul style="list-style-type: none"> <li>- The lion is vegetarian.</li> <li>- Work individually on your solution and share it with your pair.</li> </ul>	2 min	Pairs	Sheets of paper and pens.

5. Share in groups of 4 or 5:  <ul style="list-style-type: none"> <li>- How did your solution change as you got more information?</li> <li>- Why is it important to have information? What are data?</li> </ul>	5 min	4/5 people	None
6. Debrief with participants using the facilitator talking points below.	5 min	As a group	None
<b>Facilitator Talking Points:</b> <ul style="list-style-type: none"> <li>- Data are important when finding solutions to problems.</li> <li>- People make different decisions, depending on available information.</li> <li>- What information is most important or useful for you in your respective function? <ul style="list-style-type: none"> <li>- Eg. As a student, a key piece of information to maintain academic performance are due dates for assignments. Knowing this information would allow me to prioritize work, and stay on track.</li> <li>- Eg. As an instructor, learning objectives and standards are important because they impact lesson planning and provide a way to assess student and instructor performance.</li> </ul> </li> </ul>			

<b>TOOLBOX ACTIVITY 3. DATA STORYBOOK</b>			
<p>This activity allows participants to put a data story together into a narrative, like a storyteller. Participants draw a few pictures illustrating data flow in their experience. The objective is for participants to have a clear understanding of the relevance of their role and the utility of data they are collecting and/or analyzing. The facilitator/participant ratio for this activity will be 1/20.</p>			
<i>Steps</i>	<i>Time (25 mins)</i>	<i>Group setting</i>	<i>Materials</i>

<p>1. Trainers will instruct participants to draw their daily activities thinking of data gathering and how they think the data is being used in their schools (comic book style, they can also use words). The main character of the storybook should be the participants taking into account the following questions:</p> <ul style="list-style-type: none"> <li>- <i>What are your tasks? Why and how often do you do them? Whom do you collaborate with? What challenges have you faced? With whom do you share your data and how? How do you use the data?</i></li> </ul>	10 min	4/5 people	<ul style="list-style-type: none"> <li>-Flipchart or sheets of paper</li> <li>-Markers</li> <li>- Pencils and/or colors</li> <li>- Suggested materials: stamps, pictures, other visual materials</li> </ul>
<p>2. Group discussion.</p> <ul style="list-style-type: none"> <li>- Have groups view each other’s flip chart.</li> <li>- Ask volunteers to share their example.</li> </ul> <p>In the discussion, the trainer should emphasize the importance of each stakeholder in the data flow, and the main uses of data.</p>	15-20 min	Entire group	
<p><b>Facilitator talking points:</b></p> <ul style="list-style-type: none"> <li>- Present or summarize STIR 2018 data flow mapping</li> <li>- Highlight how data helps participants to be more effective at their jobs.</li> <li>- The groups could be formed based on same DEL (for SEL institutes).</li> <li>- The trainer could specify to do the storytelling about data gathering as it relates to STIR program, but also in general for the participants’ roles.</li> </ul>			

## STAGE B. DATA MANAGEMENT

### **Key Considerations**

- The activities are designed to meet the requirements of time and limited resources available for this stage of the training as it is completed.
- The use of simple and context-based examples will engage participants throughout the training process fostering their motivation and learning performance.
- The process is supported by specific moments for discussion and Q&A sessions where participants can get more specific feedback on their work and improve their capacity and competencies.
- The activities are designed to use the minimum quantity and variety of materials and to achieve the learning objectives defined for this stage within a considerable time frame.


### STEP 3: DATA COLLECTION METHODS AND QUALITY

Competency and resources differences across many districts are important factors in both the quality of the data, and collection methods. For these reasons, it is important that data management training sessions provide clear measurable standards and a uniform data collection method that all participants must adhere to. The following sections outline the objectives for this step, as well as suggested activities that may incentivize participants to preserve and deliver high quality data. STIR Uganda can leverage its existing resources to encourage high quality data management. An example of an existing resource is the Data Quality Assessment (DQA) parameters (Validity, Reliability, Timeliness, Precision and Integrity).

*Objectives. Participants should be able to...*

1. Better understand their current data management systems.
2. Know how to collect data that satisfy high quality standards (Validity, Reliability, Timeliness, Precision, Integrity).
3. Identify and utilize effective methods of data management (collection, preservation, delivery).

### STAGE B.3 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 4. UNDERSTANDING THE DQA. HOW WELL DO YOU KNOW YOUR DATA?</b>			
<p>The purpose of this activity is to have participants understand their own data management systems. Using the 5 data quality assessment standards (Validity, Reliability, Timeliness, Precision, Integrity), the participants will share in groups of 3 their own data collection, assessment, and delivery methods. Participants will use either a source of data that they themselves bring to the training, or a data source provided by the STIR training team (i.e. tracker, attendance, etc.). The outcome of this activity is a heightened awareness of the strengths and areas of improvement in participants' data management strategies.</p>			
<i>Steps</i>	<i>Time (20 min)</i>	<i>Group Setting</i>	<i>Materials</i>
1. Before dividing into groups, the activity facilitator(s) will list the 5 DQA Standards	2 min	Entire	Appendix B.2.

and discuss a high-level importance of high quality data using the DQA worksheet (Appendix B.2).		Group	
2. Participants will be divided into groups of 3. Definitions of each standard will be read, followed by a brief example. Referencing a data set that the participants have, they will each have 1 minute to assess their data using the guiding questions for each standard. <ul style="list-style-type: none"> <li>a. Validity</li> <li>b. Reliability</li> <li>c. Integrity</li> <li>d. Precision</li> <li>e. Timeliness</li> </ul>	15 min (3 min per standard.	3 to 4 people	STIR DQA standards, data set (provided by STIR or participants), Appendix B.2.
3. After discussing personal experiences with the DQA standards in their respective institutions, ask the groups the following debriefing questions: <ul style="list-style-type: none"> <li>- After reviewing your own data management methods, where are your strengths?</li> <li>- Where do you see areas of improvement?</li> <li>- How do you think a deeper understanding of these standards might assist your capacity at your respective institutions?</li> </ul>	10 min	Same groups of 3 to 4 people	STIR DQA standards, data set (provided by STIR or participants), Appendix B.2.
<p><b>Facilitator Talking Points:</b></p> <ul style="list-style-type: none"> <li>- Are there patterns or common areas of strengths, areas of improvement?</li> <li>- What have the participants learned from their peers during the group discussions?</li> </ul>			
<p><b>Additional Suggestions:</b></p> <ul style="list-style-type: none"> <li>- Depending on group size, the facilitators can copy the DQA standards worksheet (Appendix B.2 on a flipchart and have it displayed for the whole group to see). Additionally, projectors can be used if available.</li> <li>- In order to make the session more practical, participants can be notified ahead of time to bring a data set that they use at their current institution.</li> </ul>			

## TOOLBOX ACTIVITY 5. DATA QUALITY

The objective of this activity is to enable participants understand the importance of using and having quality data.

Participants will be presented with a meeting agenda which is incomplete and will be asked to complete the agenda. This activity will enable participants see the difficulty that arises when data is of poor quality or incomplete. The facilitator/participant ratio for this activity, will be 1/20.



<i>Steps</i>	<i>Time (30 mins)</i>	<i>Group setting</i>	<i>Materials</i>
<p>1. Trainers will hand out incomplete agendas to participants and participants will individually try to deduce what the purpose of the meeting is and the key goals of the meeting.</p> <p>This step will enable participants see how difficult this task could be as information is incomplete.</p> <ul style="list-style-type: none"> <li>- What is the purpose of this agenda?</li> <li>- What are the key goals of the meeting?</li> </ul>	10 min	Individual	<ul style="list-style-type: none"> <li>- Sheets of paper</li> <li>- Pencils and/or colors</li> <li>- Suggested materials: pictures, other visual materials</li> </ul>
<p>2. Participants will share their initial ideas about the meeting with another participant. Trainers will then ask participants to develop joint agenda items and a theme that could possibly be right.</p>	10 min	Pairs	<ul style="list-style-type: none"> <li>- Sheets of paper</li> <li>- Pencils and/or colors</li> </ul>
<p>3. Group discussion. The trainer should then reveal the actual meeting purpose and agenda items and illustrate how having complete information can save time and improve efficiency.</p>	15-20 min	Group	-Sheets of paper

**Facilitator talking points:**

- Data Quality is very important when utilizing it to make decisions
- Highlight how poor data can have bad long term consequences


## STEP 4: ANALYZE

Once the data are determined satisfactory, participants can begin to analyze trends, gaps, themes, high-performing areas, areas of improvement. To do so, there must be a standard performance criteria set by the school, government, and/or STIR. These benchmarks will determine the degree of "success" however it is defined for each school/district. Some important aspects to consider during this step are competency differences amongst training participants. Additionally, a key competency that should be included in the training is the ability to effectively communicate the results of the data analysis to key stakeholders.

*Objectives. Participants should be able to...*

1. Identify and understand the main trends in their relevant data source(s).
2. Learn how to communicate the results of the data analysis.
3. Judge the performance of their respective institutions.
4. Effectively use the findings to improve performance in their respective functions.

## STAGE B.4 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 6. HOW TO READ A GRAPH</b>			
<p>This activity's purpose is to teach participants how to read graphs, the relationship between variables and what this means in terms of the information that is provided through graphs. The facilitator/participant ratio for this activity will be 1/20.</p>			
<i>Steps</i>	<i>Time (25 mins)</i>	<i>Group setting</i>	<i>Materials</i>
1. Participants will be paired and given a sheet (Appendix B.1) with graphs describing information about different topics.	5 min	Individual	- Appendix B.1 - Pencils
2. Trainers will explain the information shown in the graphs using the examples provided in the sheets.	10 min	Individual	- Appendix B.1 - Pencils
3. Participants can ask questions related to this	10 min	Individual	- Appendix B.1

topic and trainers will clarify or provide explanation for gaps in the information provided.			- Pencils
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**Facilitator talking points**

- Do the participants have challenges interpreting the graphs? Which chart did they choose? Why?
- Are the relationships between variables clear? What is a positive vs a negative relationship?
- What are histograms? How can you interpret percentages in a histogram?

**TOOLBOX ACTIVITY 7: EDUCATION LEADER DEVELOPMENT PROGRAM DATA (ELPD) ANALYSIS TRAINING HANDOUT**

The participants will analyze data and recognize the main trends. The facilitator/participant ratio for this activity will be 1/10.



<i>Steps</i>	<i>Time (30 mins)</i>	<i>Group setting</i>	<i>Materials</i>
1. Trainer will give participants the ELDP Data Analysis Training Handout (Appendix B.2) and ask them to answer the questions in pairs.	15 mins	Pairs	- Appendix B.2 - Pencils
2. Group discussion. The facilitator will ask participants to share some of their responses and ask them what the main challenges were in analyzing these data.	15 min	Group	- Sheets of paper - Pencils and/or colors

**Facilitator talking points**

- Data quality parameters (referencing question 2, Appendix B.2).
- What are the different data and their uses and purposes (portfolios, data trackers, reports, case studies, etc.)



## STAGE C. ACTION PLAN

### Key Considerations

- **Motivation:** This stage allows participants to think critically about the challenges they face in their schools and specific ways to address them.
  - o It is expected that working on real-experience issues will motivate participants to develop creative and innovative solutions as it increases their ability to implement them and evaluate the impact of outcomes.
- **Time:** The activities don't only consider the limited time and resources available for this part of the learning process but also allow participants to get practice-based experience on how to develop an action plan.
- **Variability:** The activities of this stage take into account different sizes of groups taking the training so the facilitator will have the flexibility to choose the most convenient activity.
- **Capacity and Competency:** The materials are easy to understand and the questions are designed taking into account contextual aspects of the work that participants do in their communities
- **Resources:** This activities require basic resources to achieve their objectives.


## STEP 5: IDENTIFYING OPPORTUNITIES

This training manual refers to “Opportunities” as opportunities for; Making Improvements; Sharing Knowledge; Celebrating Success. Before designing an action plan, an important first step is to define the genesis of the aspect or entity one attempts to improve. For example, a participant may view an improvement in student performance, and perceive this trend as an opportunity to celebrate their success, and share to his/her peers what has worked well. This step can be symbolic of the participants’ decision making “compass” to guide future actions that aim to improve their respective institutions.

*Objectives. Participants should be able to...*

1. Identify opportunities for (1) Making Improvements, (2) Sharing knowledge, and (3) Celebrating Success.
2. Identify allies and/or key stakeholders who can assist in their efforts to improve performance in their respective functions.

## STAGE C.5 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 8: WORLD CAFE</b>			
<p>This activity allows participants to learn about peers' challenges in their roles, and discuss strategies to overcome them. This activity will let participants share their main challenges, learn from other people's experiences, and expand their networks.</p>			
<i>Steps</i>	<i>Time (42 mins)</i>	<i>Group setting</i>	<i>Materials</i>
<p>1. Participants will be grouped in groups of 4-5 people to discuss their experiences in terms of challenges and successes in their current roles. They will share a success story regarding data management.</p>	5 mins	Group	- None
<p>2. Next, participants will choose one person of the group who will stay and the rest will move to different groups. This person will be given a piece of paper (one sheet) that they will show to the rest of the group when they change groups.</p> <p>Three discussions will occur in different groups. By the end of each session, participants will be asked to write down the contact information of 5 people they never meet before. Participants will regroup towards the participants who are holding the papers and will be given 10 minutes in each session for discussion and networking.</p>	35 min	Group	- Sheets of paper
<p>3. Group discussion: a few participants will share their reactions from the activity. The facilitator will wrap the discussion with final comments.</p>	8 min	Individual	- None
<p><b>Facilitator Talking Points:</b></p> <ul style="list-style-type: none"> <li>- The real benefits of exchanging contact information and networking.</li> <li>- The importance of being aware of other people's challenges based on different roles.</li> <li>- The opportunity to learn from other people's strategies to face challenges.</li> </ul>			


## STEP 6: TAKING ACTION

Only after participants examine their attitudes, possess a solid understanding of their role and purpose within the data system, possess sound data collection and analysis competencies, and identify opportunities for growth, can they design action plans that are feasible, attainable, and measurable, and contributes to the improvement of their respective institutions.

*Objectives. Participants should be able to...*

1. Design a short-, medium-, long-term action plan that is feasible, attainable, and measurable, and contributes to the improvement of their respective institutions.
2. Identify strategies to hold themselves accountable to their action plans.

## STAGE C.6 SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 9: ACTION PLAN TEMPLATE</b>			
This activity allows participants to learn how to create a basic action plan. They will reflect on the importance of collaborating with other stakeholders, and how to establish clear and viable objectives. Additionally, they will discuss strategies to hold themselves accountable to their action plans.			
<i>Steps</i>	<i>Time (42 mins)</i>	<i>Group setting</i>	<i>Materials</i>
1. Trainers will give participants the Appendix C.1 and ask them to answer the first set of questions. <b>Only the first section</b> , participants should not fill the template during this part of the activity.	7 min	Individual	- Appendix C.1 - Pencils
2. Trainers will give an example of a completed action plan, and explain how the questions that participants answered are useful to design their own action plan. How does it look? What information do you need (trackers, teachers' portfolios, field notes, etc.)?	15 min	Group	- Sheets of paper - Pencils
3. Participants will fill the second section of the Appendix C.1 based on their roles and data they use.	15-20 min	Individual	- Appendix C.1

**Facilitator Talking Points:**

- Based on the analysis of data and your experiences, what challenges or opportunities do you identify?
- How would you assess the “problem” that you’ve identified? How can solving this problem improve your other functions?
- For each action or change to be accomplished:
  - o What action or change will occur?
  - o Who is/are responsible?
  - o By when? What resources are needed?
  - o Communication: If there are multiple people involved, how will you communicate?
- How will participants hold themselves accountable for implementing the action plan? What actions can STIR do to ensure participants are on track with their action plans?
  - o Strategies may include: check-in phone calls, reports, celebrating accomplishments.

**Additional Suggestions:**

- If printing costs are a challenge, facilitators can write the action plan template (Appendix C.1) on a large flip chart paper and have participants copy the template into their notebooks or a blank sheet of paper. Additionally, the template can be displayed via Powerpoint presentation if these resources are available.
- If there is time, have participants share action plans with their peers, discuss similarities and accountability structures.

## STAGE D. EVALUATION OF TRAININGS

**Key Considerations**

- This stage considers the limitations in terms of resources (time and materials) needed for this part of the process training.
- As participants answer the evaluation questions, they will be able to reflect on their own learning process and skills in terms of data management. This will lead to improved capacity and identification of their competencies.
- The evaluation stage aims to motivate participants by making sure that they are aware their opinion is important and useful to improve the quality of future trainings.
- Through the evaluation form and questions regarding the outcomes of the training process, participants will be able to provide important feedback to STIR which might help them improve the design and implementation of future trainings.

## STEP 7: EVALUATING THE TRAINING SESSION

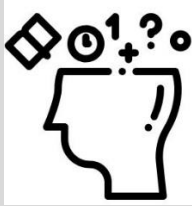
*Objectives. Participants should be able to...*

1. Revisit motives and expectations of the data management training and assess the learning throughout the training.
2. Provide clear and constructive feedback to improve future training sessions.

*Objectives. Trainers and Organizers should be able to...*

1. Assess and evaluate the immediate learning outputs of the data management training through feedback forms and conversations with participants.
2. Use feedback data to improve future training sessions.

## STAGE D. SUGGESTED ACTIVITIES

<b>TOOLBOX ACTIVITY 10: ASSESSING KNOWLEDGE AND ATTITUDES</b>			
<p>The purpose of this activity is to gain a sense of participants' attitudes and knowledge at the end of the training session. Participants will share in groups at first, then as a closing activity, will gather as a whole to share with everyone. Additionally, participants will have opportunities to leave anonymous comments and feedback to facilitators.</p>			
<i>Steps</i>	<i>Time</i>	<i>Group setting</i>	<i>Materials</i>
<ol style="list-style-type: none"> <li>1. Divide participants into smaller groups of 3-5 people. Have them discuss the following questions:               <ol style="list-style-type: none"> <li>a. What are 1-2 things you learned and will share with your community?</li> <li>b. What questions do you still have?</li> <li>c. What was your favorite moment?</li> <li>d. What would you like to see differently next time?</li> </ol> </li> </ol>	15 – 20 min	Groups of 3-5	None required

<p>2. Bring the entire groups back together. Ask the audience if anyone would like to share their favorite moment of the training. It is important to end on a positive note, and leave anonymous opportunities for constructive feedback (i.e. comment box, feedback form, or comment wall).</p>	<p>10 min</p>	<p>Entire group</p>	<p>None required</p>
<p><b>Facilitator Talking Points:</b></p> <ul style="list-style-type: none"> <li>- What are some common themes that you hear from participants? Have you noticed any changes in attitudes? Boost in confidence levels? Motivation?</li> <li>- Not everyone will end up at the same capacity/competency level, but hopefully everyone can make improvements.</li> <li>- Make facilitators available for assistance afterwards for those who are still struggling with data management practices.</li> </ul>			
<p><b>Additional Suggestions:</b></p> <ul style="list-style-type: none"> <li>- If participants are uncomfortable sharing in a group, either because they feel they haven't learned as much as their peers and are still unconfident with data management, create a comment box for anonymous feedback.</li> <li>- OR, create a display wall using flip chart paper where participants can write down something that they've learned. This could be a public display of the learning that took place throughout the data management training.</li> </ul>			

## SAMPLE TRAINING EVALUATION FORM

STIR Education, Uganda

Thank you for your participation during this training session! Your opinion is very important to us and your feedback will help us to improve our activities. We would appreciate if you take the time to answer the following questions. This information will be anonymous. Please, ask the facilitator if you have any questions.

Date: \_\_\_\_\_

1. Instructions: Please indicate your level of agreement with to following statements.

	Strongly Agree	Agree	Slightly agree	Slightly disagree	Disagree	Strongly disagree
1.The objectives of stage A (pre-data management) of the training were clear						
2.The objectives of stage B (data management) of the training were clear						
3.The objectives of stage C (action plan) of the training were clear						
4. I participated and interacted with the group and colleagues						
5. The themes that the training covered are relevant to my job						
6. The facilitator(s) were clear and prepared						
7.The activities facilitated my understanding of the content						
8. My level of motivation increased after this training						

2. Please, answer the following questions with no more than three sentences.

2.1 What did you like most about this training?

2.2 Describe one obstacle that you had during the training?

2.3 Please share any other comments that you may have about this training and its activities:

Thank you for your feedback!

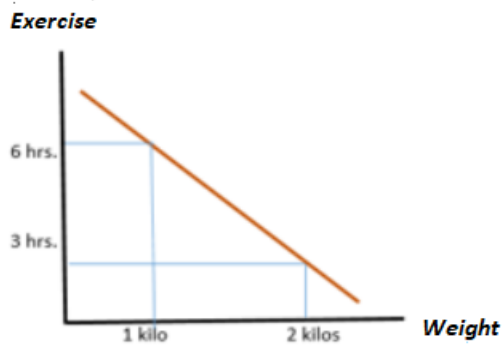
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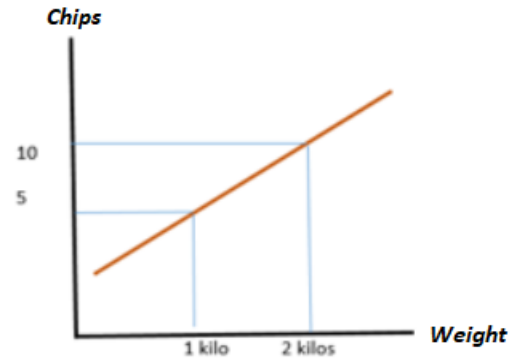
## APPENDIX

### APPENDIX B. 1 - DATA MANAGEMENT: HOW TO READ A GRAPH

***What are the effect of exercise and eating chips on your weight?***



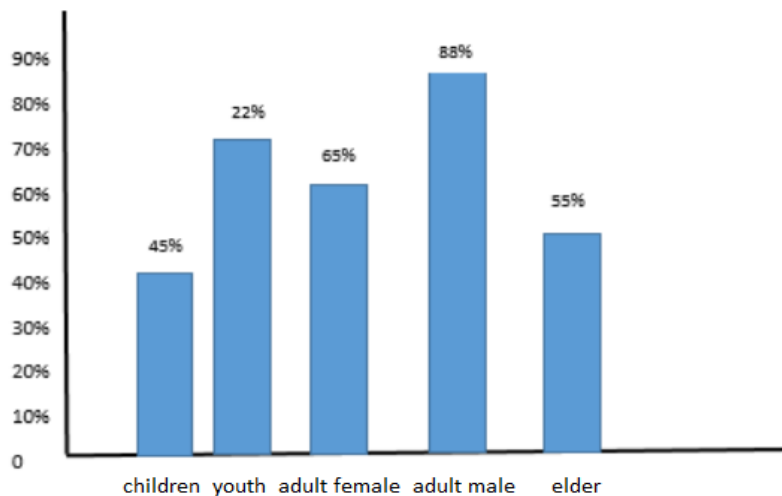
***The more hours you exercise the less you weigh  
(Negative relationship)***



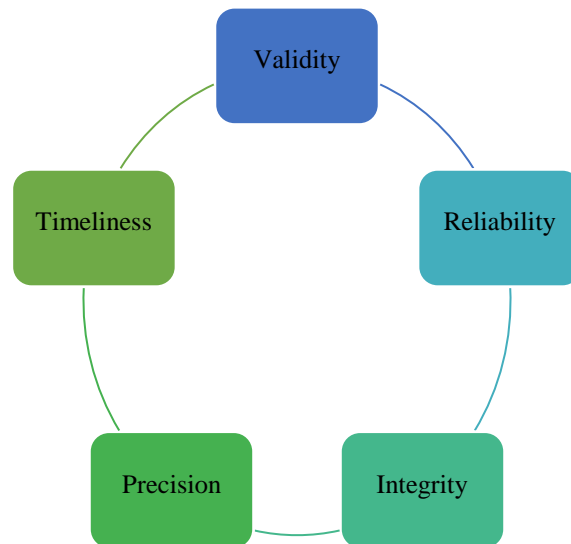
***The more chips you eat the more weigh you gain  
(Positive relationship)***

***% of people in your community who enjoy watching soccer***

- How much of the population who watch soccer are adult females?***
- What percentage of the population represent children who watch soccer?***



## APPENDIX B.2. UNDERSTANDING THE 5 DATA QUALITY ASSESSMENT STANDARDS



**Validity:** To whom will I be providing these data and why? Are the data collected relevant to the eventual receiver? Will they be able to read and interpret the data? Are the data clear and presented legibly?

**Reliability:** How have I (or myself and my colleagues) collected these data? What processes and procedures were used to collect these data? How did we check for the *consistency* of the data management processes? Did more than one person check these data?

**Integrity:** Revisit, why are we collecting these data? For what reasons will the data be used? Are there other reasons besides reporting? Have these data been manipulated? Are these data available for audit, and by whom?

**Precision:** Are these data accurate? Are there any errors? Are there procedures in place to double check for precision?

**Timeliness:** When are data collected? Is everyone aware of the data collection timeline? Will the eventual receiver of data enough time accomplish his/her objectives?

APPENDIX B.4-INCOMPLETE AGENDA EXAMPLE

DEL INSTITUTE AGENDA – JANUARY 9<sup>TH</sup> – 11<sup>TH</sup> 2018

Objectives

- 1. ....?
- 2....?
- 3. ....?

.....?			
TIME	OBJECTIVE	DETAIL	RESPONSIBLE PERSON/ RESOURCES TO USE
9:00-9:10 am	Opening	Energizer	
9:10-9:40 am	To inspire DELs .....? development for teachers	Inspiring hook: Why is the role of a DEL so crucial? Random school activity – government experiment where your child is placed in a random school. Would you be confident that your child would end up with a good education?  Reflections – why are you here? Encouraging DELs to explicitly link their role to improving student outcomes on the ground, and to reflect on the scope of their influence. Show the DELs stats on the number of students they will impact per district? Use these stats to show that to be effective at this scale, they will need to work effectively through their SELs – if they get this right, their potential impact is enormous.	What needs to happen?  Use James’ PPT – ensure it has been updated to be relevant to DELs. Speak to him or John to run through if unsure.
9:40-9:50 am	To set.....?	-Invocation  -Community agreement  -Institute goals  -Agenda for the day	Iggy
9:50-10:15 am	To introduce STIR and how we will support DELs, and establish community agreement for institute	Introduce STIR as an organization and briefly outline history in Uganda. Emphasise values, and how this has led us to working with the system in this way.  Position ourselves as a SUPPORTING agent who will work with DELs and provide high quality support to help them be effective. Introduce DELs to the handbook/how support for their role will work,	Iggy or Eva?

		highlighting why it is unique (with emphasis on support from Ministry, chance to be pioneers, the chance to work collaboratively with inspirational professionals)	
10:15-10:30 am		Ministry of Education and Sports keynote speaker	Have we identified who this is? Ensure they are aware of the 15 min timeslot – time is tight!
<b>10:30-11:00 a.m. BREAK</b>			

## APPENDIX B 5 COMPLETE AGENDA

### Objectives

1. To inspire DELs to support SELs in creating an enabling environment for teacher motivation which improves learning outcomes;
2. To empower DELs to take ownership of LIC 1, with particular focus on the importance of Growth Mindset;
3. To provide DELs with the opportunity to work together to improve key skills for the successful implementation of thriving teacher networks

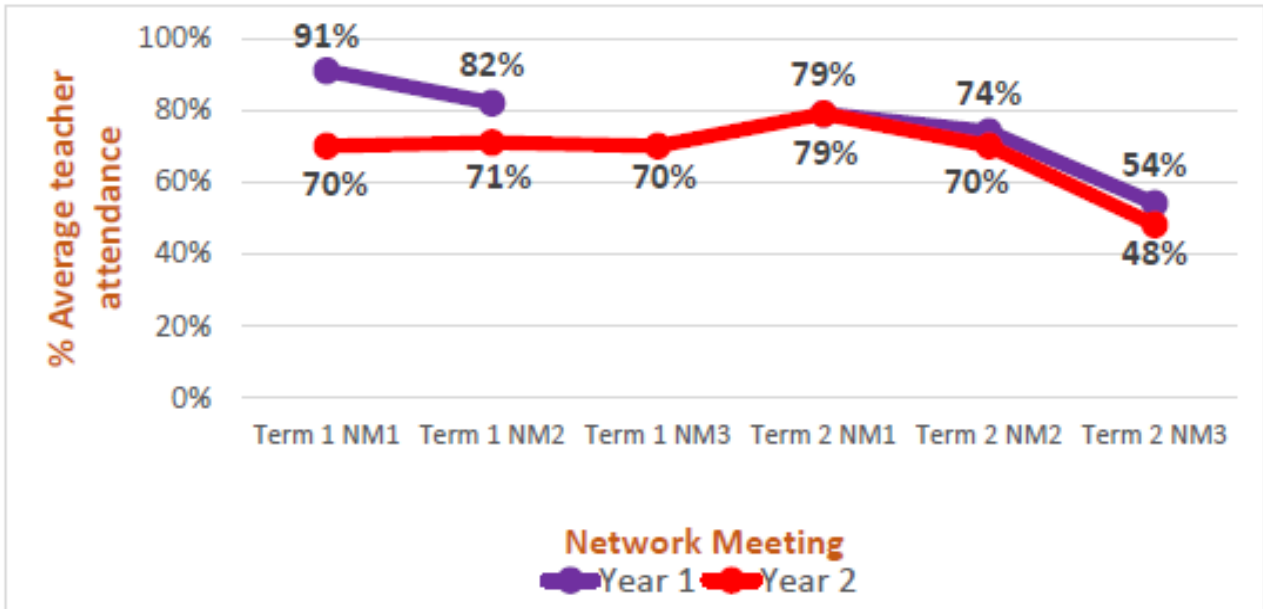
<b>TUESDAY 9 JANUARY</b>			
<b>TIME</b>	<b>OBJECTIVE</b>	<b>DETAIL</b>	<b>RESPONSIBLE PERSON/ RESOURCES TO USE</b>
9:00-9:10 am	Opening	Energizer	
9:10-9:40 am	To inspire DELs in their role as creating an enabling environment for motivating professional development for teachers	<p>Inspiring hook: Why is the role of a DEL so crucial? Random school activity – government experiment where your child is placed in a random school. Would you be confident that your child would end up with a good education?</p> <p>Reflections – why are you here? Encouraging DELs to explicitly link their role to improving student outcomes on the ground, and to reflect on the scope of their influence. Show the DELs stats on the number of students they will impact per district? Use these stats to show that to be effective at this scale, they will need to work effectively through their SELs – if they get this right, their potential impact is enormous.</p>	<p>What needs to happen?</p> <p>Use James’ PPT – ensure it has been updated to be relevant to DELs. Speak to him or John to run through if unsure.</p> <p>Speak to Christina for data on number of students per district</p>

9:40-9:50 am	To set the scene	-Invocation -Community agreement -Institute goals -Agenda for the day	Iggy
9:50-10:15 am	To introduce STIR and how we will support DELs, and establish community agreement for institute	Introduce STIR as an organization and briefly outline history in Uganda. Emphasise values, and how this has led us to working with the system in this way.  Position ourselves as a SUPPORTING agent who will work with DELs and provide high quality support to help them be effective. Introduce DELs to the handbook/how support for their role will work, highlighting why it is unique (with emphasis on support from Ministry, chance to be pioneers, the chance to work collaboratively with inspirational professionals)	Iggy or Eva?
10:15-10:30 am		Ministry of Education and Sports keynote speaker	Have we identified who this is? Ensure they are aware of the 15 min timeslot – time is tight!
<b>10:30-11:00 a.m. BREAK</b>			

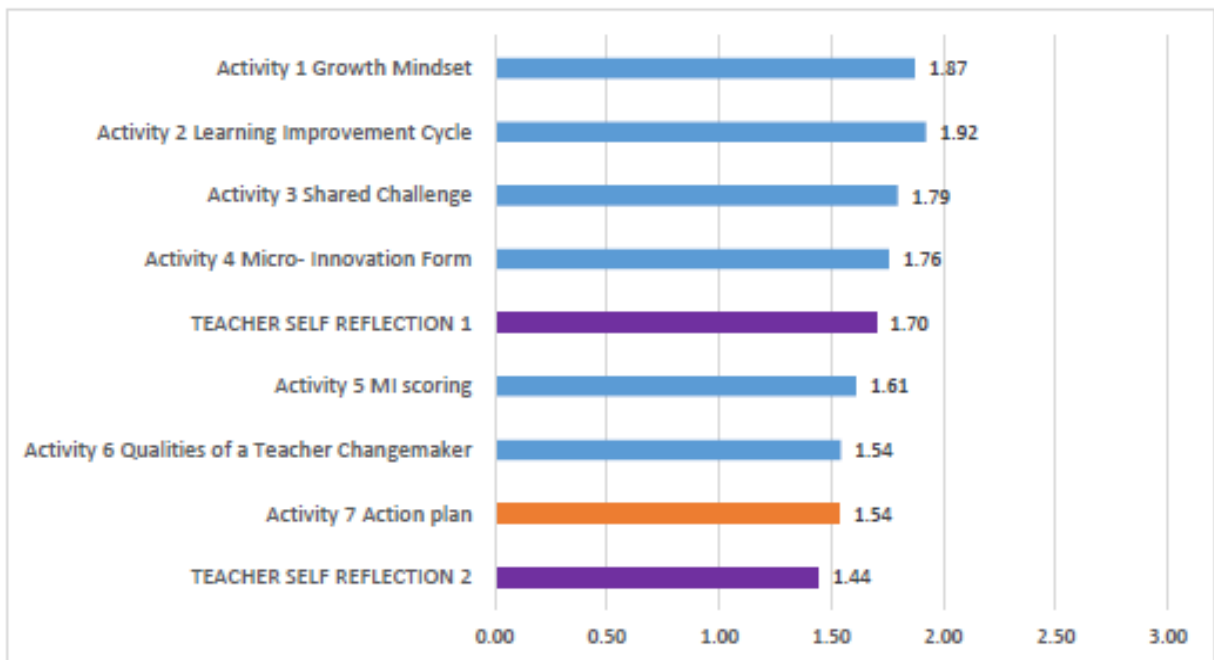
## ELDP Data Analysis Training Term 3, 2017: Year 1 ELs

Let's use the data analysis learnings from ELDP to apply to STIR data you are working with.

**Chart #1.** Below is the average attendance of teachers at network meetings for Term 1 and Term 2 (2017). This is data compiled from the trackers you have submitted for Year 1 and Year 2 teachers:



### Teacher Portfolio Average Scores: Year 1, Term 1 2017 (maximum score 3 points)



A total of 1,872 Year 1 teacher portfolio scores were reviewed across 67 districts. Average Year 1 portfolio marks were 57% for STIR primary teachers and 52% for secondary teachers.

Please select one chart option to analyze: \_\_\_\_\_ Chart #1            \_\_\_\_\_ Chart #2

Based on the information provided in Term 1, please answer the following questions to apply your data analysis skills:

QUESTION #1: Looking at the charts provided, what trends are you seeing (for attendance across Network Meetings, or for portfolio scores)?

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QUESTION #2: What are the data sources for this information? Is this data reliable? (Please consider the quality of the data)

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QUESTION #3: What other information do you need to better understand these results? (i.e. teacher attendance at Network Meetings or portfolio scores)?

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QUESTION #4: How would you communicate your analysis of this data to stakeholders?

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QUESTION #5: How will you use the findings from this data analysis?

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## APPENDIX C.1 - ACTION PLAN TEMPLATE

### *Section 1: Reflecting questions*

1. How do you think the tools of data management you learned in this workshop can help you to implement specific actions in your school (which can you realistically do)?
  
2. Who are the key people in your school with whom you need to communicate this plan and have on board?
  - a. How are you going to get them on board?
  
  - b. What are you going to do when someone says no (what's Plan B)
  
3. Think of a success story that you've had in your job (it can be related to data management or not). What are the steps you did to achieve it?
  
  
  
  
  
  
  
  
  
  
4. Identify your biggest challenge regarding data management.



**Section 2: Template**

Based on the challenge you identified in question 4, use the following table to develop an action plan that addresses your main challenge.

<b>Action</b> <i>(What needs to be done)</i>	<b>By when it needs to be done?</b>	<b>Person(s) responsible</b> <i>(Who should take action to complete the action?)</i>	<b>Goals/ Expected results</b> <i>(How does a successful action look like? What do you want to achieve with this action?)</i>	<b>Resources and data needed</b> <i>(What do you need to complete this action? What data is necessary?)</i>	<b>Monitoring</b> <i>(Was this action completed successfully? Did you identify new steps to achieve your goals?)</i>
1.	By:				
2.	By:				
3.	By:				
N .....	By:				