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| Post Graduate Diploma in Monitoring and Evaluation |
| Module 5 Assignment: Data Collection and Management |
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**Q1. Explain the difference between data collection and data capture. (10 marks)**

Data collection and data capture, although both aiming at depicting an image of the progress and quality of the intervention, manage to gather data in different forms.

Data collection, to be precise, gathers raw data in a systematic manner so that it would allow easy comprehension, analysis and future use. The manner through which data is collected should be clear, not only to those gathering information, but also to those that will confer data useful to future needs. Data collection can take place through different methodologies, all which should be applied according to the context.

Data capture differs from this as it takes place at a stage of monitoring and evaluation that follows data collection. While collection gathers information, the capturing of said data means it is inserted into a system, data base or system of sorts. An effective data capture relies on the high quality of data collection, and an effective analysis cannot take place unless data capturing is done correctly.

Therefore, data collection and data capture are different because they occur at different stages of the process of M&E and bring different results to the table. Both, however, need to be at the highest of standards to allow the programme manager and/or M&E officer to do a good work.

**Q2. Explain the benefits of correctly interpreting data in an M&E process. (5 marks)**

Correctly interpreting data would bring positive results at different levels before, during and after the implementation of a project or programme.

By interpreting data before the initial phase of the project, programme staff will be able to set goals that would be as realistic as possible to positively influence the target population/environment. By carrying out data analysis during the implementation will allow to see whether priorities have changed and whether the results and objectives are being met at the set pace. By doing a further interpretation, one can measure the change and impact of the activities done during the project cycle.

By working through an M&E process, the systematic and unbiased interpreting and/or analysing of data would be insured. By the use of Standard Operating Procedures set at the creation of the M&E process, members of staff will make use of the information gathered in such a way that would inspect the factors of efficiency, effectiveness, relevance and sustainability among others.

M&E processes can take the form of computer software, such as Geographic Information Systems, excel spreadsheets, MS access databases or Microsoft BI reports. Through the use of programmes such as these, all the afore-mentioned factors would be upheld and respected.

**Q3. Explain the main concerns for a data analyst while undertaking the task of data analysis. (10 marks)**

When analysing data, one should take under consideration both human, contextual and technological difficulties. Under the category of human concerns, there could be bias on the knowledge of the context, of the organisation and of the same beneficiaries from which data was collected. All this knowledge should not be kept aside, as it could turn useful when explaining the results, but should be monitored. Of course to avoid further human “error” a data analyst should employ the company of a fellow colleague to discuss, in an internal capacity, the results and analysis.

The contextual concerns that could arise include the capacity of the staff engaged in the data collection: were they trained before? If not, an analyst should be aware that there could be faults in the methodology used and should include the fact that bias at the data collection phase could have been present at the reporting phase of the analysis. Of course, another concern that could take place within different contexts, would be the ease at which the sample population were in. If not, results could be skewed and said factor would have to be taken under consideration when so is the case.

Of course, when using software such as GIS mapping, Excel, Ms BI, etc. there should be a certain level of awareness when analysing the data inserted. The member of staff that has done data capturing needs to have thorough knowledge of the application being used, otherwise the analyst would receive inadequate data. Furthermore, without proper training in data capturing techniques the methods through which data is inserted might not be correct, probably causing the analysis to miss out on collected information or to have misrepresented results.

Concerns when analysing data, therefore, are all around, but when an analyst is trained in their field and ensures that colleagues involved in the data handling are also properly trained, these difficulties can be easily managed.

**Q4. Describe key measures that are mandatory for data quality assurance at program level and explain the value of data quality assurance. (15 marks)**

When data quality assurance is carried out at programme level staff should ensure that it, as illustrated by USAID (n.d.): valid, reliable, precise, timely.

When valid, it means that the data should be closely related to the set indicators, otherwise it would never bring contribution to the project and the organisation. When valid, data assurance means that errors are considered and taken under consideration or a contingency plan is already established.

If reliable, it means that the date is real, under the form of questionnaires, receipts, medical charts, etc. and can be easily retraced to further analyse or to prove the outcome.

When precise, data assurance allows small if inexistent margin of error, and means that the method(s) of data collection used are contextually appropriate and relevantly used.

By being timely, it means that the data follows the project/programme cycle and does not include “late” data which are no longer relevant and do not allow measurement of the indicators.

Besides these criteria, good quality assurance can only take place if staff has the adequate capacity and training, if a protocol or SOPs are put in place, if all the prescribed documentation is provided and made readily available, if there is a cross-checking mechanism in place, if there are strategies to cope with sudden obstacles, and, of course, if there are enough resources, human and financial, available to carry out such an efficient plan.

Without data quality assurance, all the data collect would be questionable and could be easily considered unusable for internal and external reporting. Data quality assurance permits the organization to make use of the data gathered in an efficient, effective and constructive way, that would allow the conclusions to help with internal growth as well as to show donors the results achieved.

**Q5. In about 350 words, describe the main challenges to effective data interpretation and analysis. (10 marks)**

As with many processes in the world of programming and project implementation, data interpretation and analysis can only be efficient if there are sufficient resources, if the context allows it and if external issues do not arise.

Human resources must be accounted for when interpreting and/or analysing data. Staff tasked to do it should have trained and should be aware that bias is not an option. Furthermore, analysts should have the capacity to deal with the technological issues that might arise, ss nowadays all data capturing is done electronically and personnel in charge should be well-versed in at least one tool dedicated to data interpreting and analysis. Without these tasks, correct interpretation, analysis, and therefore reporting could be comprised and could not only be of poor quality, but also of poor integrity, putting under bad light the entire implementation of the project.

Of course, financial resources must also be present otherwise the necessary programmes/software and staff cannot be used to fulfil the interpretation and analysis. The consequences of a lack of financial resources would not only go beyond interpretation and analysis, just as with poor human resources, but would also arise earlier in the process, compromising good data collection and capture.

Just like when dealing with data collection, and when implementing the project overall, data interpretation and, especially, analysis should take place keeping in mind the context, while also maintaining impartiality. Poor knowledge of the context can lead to a challenging and perhaps inaccurate interpretation and analysis of the data collected.

And challenges that can arise when interpreting and analysing that can, at times, arrive from external environments. What that means, for example, is a donor suddenly changing the perspective of the monitoring, or of the survey, and requiring new information that were initially considered unimportant, or not considered at all. When analysing, there should be clear internal and external communication that all is clear and the analysis can proceed.

Overall, when analysing and interpreting data challenges can arise from every corner, therefore flexibility should always be adopted, just like in every aspect of this job.

References

USAID (n.d.). *Data Quality Assurance*. [ebook] Available at: http://www.fsnnetwork.org/sites/default/files/Data\_quality\_%20assurance\_short.pdf [Accessed 2 Mar. 2019].