

Contributions of the Most Significant Change (MSC) to Monitoring and Evaluation

Pauline Wangeci Mwangi¹, George Mwema Syengo¹, Isaac Odhiambo Abuya¹

¹Department of Management Science & Project Planning,
Faculty of Business and Management Sciences, University of Nairobi

Abstract – This paper discusses the contributions of the Most Significant Change (MSC), its benefits and challenges in the context of monitoring and evaluation. The inquiry used qualitative methods of data review. It was evident that one of the recognizable change systems of the monitoring and evaluation model is the Most Significant Change (MSC) analysis. The model was founded by Rick Davies in late 1993, and it is still helpful to date, particularly in social settings. Today, the majority of NGOs in developed and developing countries use the model to evaluate and monitor their projects through consideration of various stories as well as through the use of democratic and participatory involvement of others in the project. In using the model, project managers must gather stories, especially stories of substantial transformation among staff, volunteers, participants, and groups. The stories are then verified to evaluate the changes in place. The model works best in social settings, and it was first applied in Bangladesh by Christian workers and Rick Davies to solve humanitarian project challenges. In using the model, key elements and steps that should be considered include defining the change, deciding how to collect the stories and collecting the most significant change stories. The stories are then verified, and evaluation is done to ensure that the project meets all the stakeholder’s needs and values. The model works best with qualitative methods and is mostly used when changes are uncertain. However, it is associated with unreliable data and bias since it involves personal stories. It is important that project managers use the model to promote the accountability and transparency of their projects. This study fully contributes to monitoring and evaluation since it highlights some of the ways that project teams can use in managing their stories and using such stories to promote their project scope, accountability and transparency.

Keywords – most significant change, evaluation model, theory of change, monitoring and evaluation

I. Introduction

There are various ways and forms of monitoring and evaluation frameworks. However, one of the recognizable change systems is the Most Significant Change evaluation model. The model is associated with Rick Davies who developed it in late 1993 (Heck & Sweeney, 2012). It began with the oversight of assistance initiatives in underdeveloped nations, the use of story- and dialogue-based methodologies has become more widespread globally (Dart & Davies, 2003). This is due to the fact that participatory settings are where the approach is most frequently applied in many of the countries.

Stories from participants of substantial transformation are gathered from Staff, volunteers, participants, and groups, typically with an interest in a program or service (Ho et al., 2015). The most important accounts are picked by a chosen group, and they are then utilized to model the transformation process and assess the current situation. In most cases, the model is used in developing evaluation conditions that relate to social works and this is due to the fact that it was developed to solve social setting challenges in Bangladesh by Christian workers and Rick Davies (Heck & Sweeney, 2012).

Based on the above background, the primary objective of this paper is to evaluate and provide review on the Most Significant Change model of evaluation as well as monitoring. The paper also provides a critical literature review on the topic and this includes analysis of the historical development of this model in early 1990s. The paper also discusses some of the key elements within the Most Significant Change model of evaluation as well as the steps and processes involved in the evaluation. Importantly, the paper includes analysis of the strengths and the limitations of the Most Significant Change model of evaluation. Finally, the paper provides relevant key lessons and suggestions on how people can use this model to improve their planning as well as monitoring and evaluation activities. It is expected that adoption of this model will promote qualitative analysis of project outcomes and help project teams to promote accountability and transparency in their projects.

II. Literature review

Regarded as one of the best models of evaluations in social settings, the Most Significant Change Technique (MSC) is viewed as an effective monitoring and evaluation model when dealing with social development challenges (Heck & Sweeney, 2012). The model is associated with Rick Davies and it was first used in Christian programs in Bangladesh in late 1994. During this time, the model was used to promote success in the development of Christian mission programs. However, it was later expanded to cover other conditions that can help gain insights in rural development and other social settings agenda (Ho et al., 2015).

In other regions in USA, UK as well as in the African setting, majority of the NGOs use the model to promote and improve the social development activities and programs. It is a participatory and democratic approach towards solving others’ problems and it is commonly used in human conditions (Ho et al., 2015). This means that it is derived mostly from a qualitative point of view. People using the model have to consider the new changes and provide conditions why such changes have occurred and how it can be managed in the near future. This is important in developing framework that

promotes social change and development in the world (Heck & Sweeney, 2012). The model covers others viewpoints as well as their opinions towards managing operations and it are based on the framework depicted in figure 1 below.

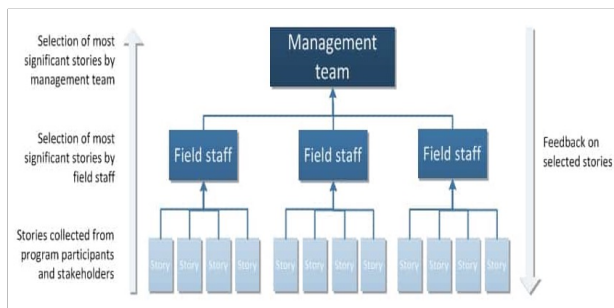


Fig. 1. Source: Heck & Sweeney, (2012)

History of the Most Significant Change Model of Evaluation

A type of participatory evaluation and monitoring is the Most Significant Change (MSC) approach used for evaluation in this study. Stories of positive transformations created by project or program stakeholders are gathered and chosen for collection. Thus, MSC can be utilized in projects and programs when it is challenging to identify pre-defined indicators of change since it is impossible to exactly forecast intended changes in advance. Rick Davies created the model in Bangladesh in 1990 (Heck & Sweeney, 2012). Numerous NGOs all around the world have since implemented the method extensively. It features a user manual that was written in 2005, giving users the chance to compile change stories generated by project or program stakeholders. The key component of the concept is including stakeholders in a documentation, analysis, and discussion of change. Since it is impossible to foresee intended changes precisely in advance; this method is typically utilized in projects when it is difficult to build up pre-defined indications of change (Davies 1996). The model supports the adoption of non-linear planning and other non-logical framework approach.

In most cases, the model is applicable in conditions where it is not possible to predict in any detail the outcomes and where the output is not direct and vary. It is also used where there is no agreement between stakeholders on what to expect and the changes are based on democratic as well as participatory models (Heck & Sweeney, 2012). It can therefore be utilized to aid in the planning of upcoming events. Nevertheless, it is applied in a project once enough time stipulated has passed, thus, it is considered not to be a planning tool in a project. Many firms use it to promote evaluation models associated with transparency and accountability and this is why it is common among NGOs (Ho et al., 2015).

Contextualising the Most Significant Change Model

Chianti (2009) asserts that M&E processes allow program managers and policymakers to assess the evolution and progress of an intervention over time; determine the effectiveness of program implementation, identify gaps between the set goals and achieved results; and determine whether the proposed changes can effectively impact the programs' progress. Despite the fact monitoring and

evaluation are often used together, they have different meanings and purposes (Dart & Davies, 2003). The monitoring aspect entails continuous collection and analysis of information about an intervention or a program, then comparing the actual outcomes against the set targets or establishing the progress of an intervention's implementation.

Monitoring often uses the data generated from the program or intervention itself. In evaluation, a program or intervention's elements are objectively and systematically assessed to determine their overall significance or worth. Primarily, the evaluation process offers credible information to policymakers to help in the achievement of a more desired outcome. The two main types of evaluation are performance evaluation and impact evaluation (International Labor Organization, 2020). A well-articulated monitoring and evaluation framework can play a significant role in thinking through a program's objectives, strategies, and activities and determining whether the program is heading in the right direction.

Monitoring and evaluation of programs, initiatives, or projects in companies or organizations are backed up by theories. These theories often prescribe the frameworks underlying their M&Es' evidence-based practices. Fundamentally, these theories specify the feasible practices that can be employed in constructing a formidable knowledge regarding the project or program's value (Shadish, Cook, et al., 1991). These values include programming/planning, valuing, understanding, use, and practice. It is important for project policymakers and managers to start a project's evaluation and monitoring on a good approach, which begins with proposing a comprehensive methodological approach to M&E processes, then identifying the most relevant theory. It also entails considering the M&E's purpose, developing evaluation questions to inform methodology and determining the theoretical foundation. Kanyamuna & Phiri (2019) asserts that focusing on a particular theory at the start of a program or project ensures the process is helpful, purposeful, and intentional.

Theories that back up the M&E process are the theory-driven evaluation, empowerment evaluation theory, values-engaged evaluation theory, programs, utilization-focused evaluation theory, and theory of change, (Barnett & Gregorowski, 2013). The theory of change approach to monitoring and evaluation is increasingly becoming popular and is considered an essential practice for many projects, programs, and organizations (Barnett & Gregorowski, 2013). M&E activities are described by the theory of change on how various interventions achieve the intended outcomes. Although Theories of Change can be developed in many different ways, the common elements of the theory include the definition and testing of critical assumptions, partners' roles in contributing to change, and an articulation of how change happens in a particular context (Chevrier, Piketty, & Reed, 2020).

A good theory of change can play a major role in providing an incredible structure for data analysis and reporting, identifying gaps in the available data, determining key monitoring indicators, prioritizing additional data collection, and developing better key Evaluation questions (Barnett &

Gregorowski, 2013). Monitoring and Evaluation (M&E) processes have increasingly become popular tools for good management and performance. Managers and leaders within and across different fields and sectors are increasingly adopting these processes to enhance their organization's performance and increase the chances of attaining the desired goals. Government institutions, non-government organizations, multinational establishments, and development agencies repeatedly demand more refined evidence for their practices, programs, and projects, and M&E is satisfyingly helping them accomplish such (Winderl, 2021). On the other hand, beneficiaries of various government projects, non-government initiatives, and business offers are no longer limiting their demands to outputs, activities, and inputs. However, they now want more sustained long-term benefits and results from these establishments. M&E has become instrumental for the beneficiaries in analyzing and examining the consistency of the organization's benefits and offerings (Rabie & Cloete, 2009). Overall, M&E is integral in ensuring good governance and better global projects, programs, and policy management.

Despite the growing popularity and relevance of M&E, scholars have continuously questioned the theoretical constructs informing M&E's practice and process. Considering the broader Development Studies discipline and literature gaps pertaining to insufficient efforts to justify the link between M&E and the existing theories so that its process is formally entrenched in the theoretical contexts and foundations are evident (Chevrier, Piketty, & Reed, 2020). However, before exploring theoretical constructs guiding M&E processes, practices, and operations, it is essential to review M&E in detail and depth. M&E is a continuous process of collecting and assessing the collected information to determine whether progress is made toward pre-established objectives, goals, and results and highlight the intended and unintended effects of the project or initiative are valid or not. Kanyamuna & Phiri (2019) argue that M&E is an integral aspect of a project's life cycle and good management practice; hence, it should be evident throughout a project's lifecycle and after a project's completion. M&E offers a seamless information flow for managers' internal use and stakeholders' external use (Rabie & Cloete, 2009).

It improves accountability, transparency, and trustworthiness in a project's undertaking and implementation. The monitoring aspect of the process tracks the progress and performance of a project or initiative as the basis for making various decisions at various stages in the implementation of the project or initiative. Monitoring systems such as OpenNMS, Icinga, and Cacti offer managers and other actors' regular information on progress relative to the set outcomes and targets, enabling them to develop and justify budgetary requests, alter operations, identify problems and propose solutions early enough, and track the overall progress (Raftree & Bamberger, 2014). In his article, Winderl (2021) insists that monitoring is a critical part of any good management system. The evaluation aspects of the process focus on assessing the data collected during the evaluation to establish the extent to which the initiative is succeeding or failing in achieving the set goals and objectives.

Periodic evaluation can be used to analyze and investigate the progress of management targets (Nirmala, Pankaj, Kumar, Shankar, & Anshida, 2022). The evaluation also examines the cause and effect of a situation and trends recorded during the monitoring. As such, monitoring and evaluation work in tandem to ensure the success of a project or initiative. Government institutions and organizations are increasingly using M&E to facilitate the success of their projects or initiatives and be accountable to their stakeholders while providing evidence to demonstrate their progress and success. However, the increasing attention to M&E has resulted in various challenges to the system, necessitating changes to make it feasible in all or majority of projects (International Labor Organization, 2020). In particular, recent technological advancements have posed significant challenges to M&E systems. With most M&E systems still using rigorous traditional approaches to gather and analyze information on projects and initiatives, these systems are facing significant challenges to be feasible in examining contemporary projects and initiatives. World Health Organization (2016) noted that when generating evidence is technically expensive and challenging, M&E fails to be feasible in most projects. As such, it is paramount that M&E considers technological changes in its operations and processes.

Most Significant Change in Social and Technological Monitoring and Evaluation

The contemporary world is highly connected and networked by various technologies. Today, technology is everywhere, offering various possibilities for organizations to improve their operations. M&E is one of the business functions undergoing a technological revolution in most of its processes and activities. Traditionally, M&E processes have revolved around spreadsheets and monitors and evaluators visiting the actual projects to collect and analyze data over time (Nirmala, Pankaj, Kumar, Shankar, & Anshida, 2022). However, the increasing emphasis on more inclusive and real-time feedback, the increasing spread and use of information, and the requirement for more rigorous and quantifiable data have created an excellent opportunity for the integration of various technological devices into the M&E systems (Winderl, 2021). According to (Morawska et al., 2018), sophisticated data management systems and digital technological devices are driving the increasing shift from traditional M&E systems to technological monitoring and evaluations. Many organizations are now technologically empowered to move beyond collecting and analyzing data using spreadsheets into more advanced data collection and analysis devices. Some key areas demanding technological integration in M&E systems are collaborations between monitors and evaluators in different locations, speedy development of plans, and documentation of the collected data. Brown (2007) states that technology monitoring and evaluation is a cost-effective way to achieve project goals and objectives (Ho et al., 2015).

Technology monitoring entails remote data collection, supervision, and management across different locations, making most of these operations online. On the other hand, Technology evaluation entails using a set of technological tools, methods, and principles to assess the progress and effects of a particular either remotely or centrally. Technology

evaluation is described by UNDP (2013) as a procedure that entails an examination of technology advancements, their effects as well as discussion based on these evaluations. Information from technology evaluation should aid those designing plans and assist identify potential topics for future technology evaluation research that consist of new ways of technological innovation (Nirmala et al., 2022). Across the globe, there is an increase use of mobile phones and other ICT technologies, which has tremendously increased people's access to information, changing many people's communication modes, interaction levels, and information handling. In particular, there has been a massive increase in people's participation and involvement in various governmental and non-governmental projects, triggering more demand for more inclusive and timely feedback (American University, 2022).

Additionally, ICT technologies have increased people's access to remote areas, even areas that were initially inaccessible to many people. To be specific, some ICT technologies have increasingly opened remote, inaccessible areas previously difficult to access for data collection (Winderl, 2021). These technologies have introduced more innovative data collection, analysis, documentation, and rapid processing approaches (Ho et al., 2015). For example, OpenVMS enables more inclusive and timely project monitoring and data reporting. Subsequently, monitors can use mobile devices to share the collected data and reports for analysis and evaluation (American University, 2022).

Mobile phones allow monitors to undertake SMS-based surveys and internet connections allow real-time sharing and compilation of collected data. Subsequently, the technologies allow companies and governments to crowd-source evaluators and monitors globally (Nirmala, Pankaj, Kumar, Shankar, & Anshida, 2022). Technology evaluation and monitoring are emerging innovations that are rapidly changing M&E systems and operations. Despite the clear benefits that organizations are likely to accrue upon integrating modern, advanced technologies into their M&E processes and systems, several studies affirm that many governments and organizations are yet to undertake this innovation. A recent Capterra research revealed that only 27% of multinational firms had integrated technological innovations into their M&E systems (World Health Organization, 2016).

The survey noted that most industry professionals are still grappling with the wide variety of technology that can be integrated into M&E and experimenting with where and how these technologies can be placed into existing M&E frameworks (Ho et al., 2015). Additionally, some have cited uncertainty about the benefits of these technologies in their M&E systems and projects. Notably, companies stand to accrue numerous economic benefits upon adopting technology monitoring and evaluation in their operations, including reduced costs, richer data and information, greater outreach, and better insights (Morawska, et al., 2018). Consequently, these benefits facilitate the success and achievement of the project's goals and objectives. Governments, business enterprises, non-profit organizations, and development agencies should adopt technology evaluation and monitoring in their M&E systems to ensure the success of

their projects and initiatives. This can be done after careful adoption of most significant change framework and analysis of others' views and success stories (Ho et al., 2015).

Key Elements in the Most Significant Change Model

There are various elements that are ingrained in the model. For example, the model includes showing interest and defining what to be covered (Ho et al., 2015). In addition, the model includes different stakeholders (Kraft & Prytherch, 2016). Time when the model will be used must be indicated. It is also important that project managers adopt effective data collection to ensure that they only gather important information. Other important issues include the consideration of feedback and verification of the information gathered (Howes, 1992). This is done with the aim of revising challenges and improving the outcome. To some extent, the model is very effective in cases where there are many participants and the changes outcome is huge (Dart & Davies, 2003).

When using the model, significant changes must be defined and explained. This give the people involved the chance to engage actively in the process and this is important for general success and good position of the project. The gathering and methodical selection of reported changes using purposive sampling with a bias in favor of success is the main procedure of the Most Significant Change approach in data collection (Ho et al., 2015). In order to achieve this, one should encourage field personnel to gather anecdotes from stakeholders, emphasizing on the most important change that they believe an activity has brought about and why they believe that change happened (Limato et al., 2008). This information is reduced down to the most important as judged by each management layer until just one story is picked that has a true experience narrative and shows success of the project.

Steps Involved in the Most Significant Change Model

There are various steps involved in using this model. Some of the steps include defining the change and deciding the way to collect and manage the stories (Ho et al., 2015). There is also the need to collect important change views and verify them. Thus, it is well illustrated in the figure 2 below.

Step 1: Definition of the Change

Typically, the initial step in MSC is to present the approach to a variety of stakeholders in order to foster their sense of ownership or capture their interest (Heck & Sweeney, 2012). Targeted beneficiaries, representatives of donors, workers from various organizational levels, project or program staff, and others may all represent stakeholders on an organization (Willetts & Crawford, 2007). There are various domains in MSC that can be observed; often they include between three and five. Moreover, Domains may be created to record change on a variety of scales, including the community level or the individual. This is common in managing changes based on life quality and other models of culture change or how people work and move in the community (Ho et al., 2015).

Step Two: Explaining ways to collect the Stories

Choosing when and how to gather the narratives is the second phase. Choosing the techniques that will be applied to identify, record, debate, choose, and evaluate the accounts is required.

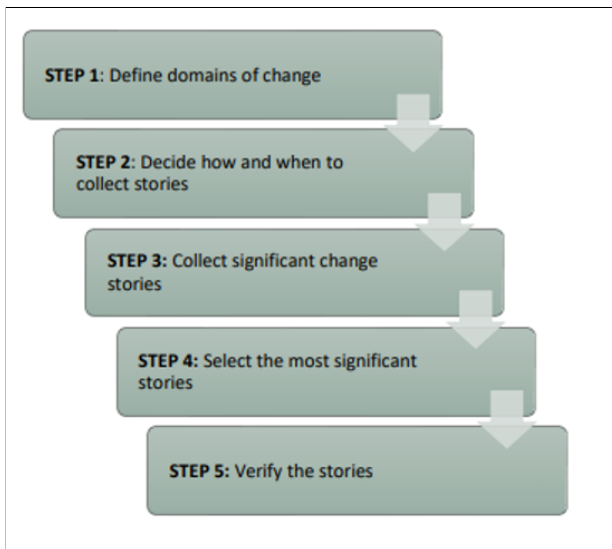


Fig. 2. Figure 2: Steps in MSC model

Source: Ho et al., (2015)

Although MSC tales are often written down, they can also be captured via video or audio (Heck & Sweeney, 2012). It is crucial to determine at this point how frequently tales will be created if MSC. Thus, it is going to be utilized as a continuous monitoring procedure (Dart & Davies, 2003). The selection criteria, the make-up of the groups that will choose tales at various levels, and the usage of the stories by the program or project are other decisions that could be made at this point. The kind of company or project involved will frequently influence these choices. Procedures and Systems for a more complicated project operating in a smaller number of sites will differ from projects with fewer layers and a simpler structure (Ho et al., 2015).

Step Three: Collecting the Important Stories for Change Management

Gathering change stories is the third phase. Stakeholders who are directly involved in a program or project, such as a program employee and a targeted beneficiary, are typically the ones who tell their stories to MSC. Stakeholders are questioned periodically about the biggest changes they have experienced or noticed within each domain in the recent past (Heck & Sweeney, 2012). After that, either the stakeholders themselves or someone else on their behalf documents the tales. MSC mandates that each tale be documented with certain additional information as well as summary of the whole narrative. Hence, it can include information on people who gave out the story explaining what happened and why the story is important. Thus, various rules should be used in collecting and managing these stories (Ho et al., 2015).

Step Four: Selecting Valuable and Useful Stories

The most notable change stories should be chosen in the fourth phase (Yassin & Houbay, 2022). When the stories are finished being written, people listen to their audio, read them aloud, or see the videos. They then analyze the significance of each narrative and choose which tales; they believe to be the most important within each subject (Ho et al., 2015). This could be carried out in a single area by a single team as part of a single project. Therefore, MSC is more frequently used in

significant programs or projects. In situations like this, the most important stories are advanced to the next phase. Thus, at the community level, tales created by various organizations within a community might be combined. Moreover, various levels of analysis might be applied to stories from various programs. This method uses a hierarchy to successively debate and evaluate tales at different level (Heck & Sweeney, 2012).

There should be an emphasis that the most important stories in each area are selected by each level, and they are subsequently forwarded to the next level in the hierarchy (Lunch, 2007). Eventually, a select few tales stand out as being the most important of all. The narratives, together with a justification for their selection, are then sent back through the hierarchy following each level from the start (Wilder & Walpole, 2008). The selection of tales for the following round of data collecting should subsequently be improved in response to this feedback (Dart & Davies, 2003). As part of what distinguishes MSC from subjective approaches of selecting stories or ad-hoc, it is crucial that the procedure used to choose the tales be clear and open. As a result, all relevant parties should be aware on how new tales are chosen, the criteria used to make the selection as well as an explanation of the selection (Dart et al., 2000).

Step Five: Verification and Evaluation of the Stories

The verification of stories wherever applicable is a crucial component of MSC. It is vital because if not, stories that are susceptible, deceptive, or false to several interpretations could be chosen. As a result, before being utilized or transferred to the next level of the hierarchy, all tales should generally be verified for authenticity (Heck & Sweeney, 2012). Talking to various stakeholders to get their opinions on the selected story is frequently included in this verification process. This can occasionally be accomplished at the gathering and selection sessions, but occasionally further effort may be required. For instance, it would be beneficial to travel to the locations where the events are narrated (Choy & Lidstone, 2010). Furthermore, it could also be beneficial to obtain additional data to fill in any gaps in the tales or to further explain any changes that have been noted. It is obvious that the tales are rejected if they fail the verification test and other stories are added in their place (Ho et al., 2015).

Methodology of Most Significant Change Model

i. Qualitative Research Models

As a qualitative approach, MSC is not typically utilized to provide quantitative data. This may occasionally be difficult in the development field since many donors want quantifiable reports to be presented to them (Ho et al., 2015). To get over this, there are primarily two options; firstly, MSC may be used in conjunction with other approaches that provide quantitative data, depending on resources. Secondly, MSC can produce various types of quantitative data by itself. It is possible to accomplish this in at least three different methods (Davies & Dart 2005). Firstly, within specific change stories, it is occasionally able to report on statistically significant information, such as the number of persons who benefitted from a change and the manner in which they benefitted.

To determine how frequently a specific type of change is discussed, it might be helpful to gather all the stories. Thus, stories that were not selected are moved on to the next level of the hierarchy (Dart & Davies, 2003).

ii. Data Collection Model

This model uses primary data and selecting the most important tales in each area and then asking all other stakeholders participating in the process if they have experienced or seen a similar shift is another method of coming up with figures. As such, it demonstrates both the type of the most important shift that is taking place and its scope (Heck & Sweeney, 2012). Data is collected using interviews in most cases when involving this model. This is important in engaging and reviewing the views of the participants (Ho et al., 2015).

III. Discussion

From this analysis it is evident that MSC model is one of the most effective models in evaluating project that require others' opinions. It is also evident that the model can be applied in different contexts where project scope is not certain. Analysis also confirmed that the model can be used in promoting project scope in different context. Rick Davies had the task of determining how a humanitarian initiative will affect 16,500 individuals in the Rajshahi zone of western Bangladesh in 1994. There were too much differences and a great deal of disagreement to try to get everyone to agree on a set of parameters.

Instead, Rick came up with an assessment strategy that depended on participants recounting the important changes they had seen as a result of the initiative (Ho et al., 2015). The storytellers also gave their justification for believing their tale was important (Heck & Sweeney, 2012). The project would have had a beautiful collection of narratives if Rick had stopped there, but the main players' understanding of the initiative's impact would have been quite limited. In order for the stakeholders, who are primarily the project's eventual funders and the regional decision-makers, to feel and see the change, Rick needed to involve them this process throughout the stages (Dart & Davies, 2003). He came up with the idea of asking groups of individuals working on the project at various levels to choose the tales they felt were most important and to justify their choices.

In order to submit one tale to the main office in Dhaka for each of the four strategic priorities, each of the four project offices has to collect a number of stories and pass it through various stages. For instance, from the 16 stories that were submitted, one was chosen by the Dhaka head office personnel (Heck & Sweeney, 2012). The level and the original storytellers were informed about the chosen stories and the criteria for selection. The project's beneficiaries and the stakeholders both gradually came to comprehend their contributions and the impact they were making in the process (Ho et al., 2015). Using a methodical approach, MSC therefore created an intuitive knowledge of the project's impact that could be shared together with the objective data. The outcomes of Rick's approach were quite beneficial, since it had great involvement in the project growth and the positive

improvements were recognized and emphasized. In his success, there are stories that helped in resolving a family feud over the use of contraceptives, assumptions and worldviews came to light, and various stories were heavily referenced in publications. Companies are already realizing that challenges like leadership development, learning initiatives, communities of practice, and culture change might benefit from an MSC approach. Additionally, MSC has so far mostly been used by various non-profit organizations such as NGO programs (Dart & Davies, 2003).

This analysis noted that MSC model has been used in many NGOs based projects across the world. It is used since it promotes analysis of other views towards the project. When used in project it helps to promote accountability. This is why it is common among project managers, especially within NGOs. Most of the time, the approach may be used to assess and track programs or projects that lack predetermined outcomes and hence cannot be assessed or tracked using established criteria (Dart & Davies, 2003). Additionally, compared to many other techniques, the model is better suited to deal with unforeseen change (Heck & Sweeney, 2012). This is why it is common among social projects.

The model is also a participative method that aids in identifying changes in people's lives from their own viewpoints (Dart & Davies, 2003). Thus, programs and Projects benefit from having a better understanding of how various stakeholders perceive various changes during the process. Many NGOs use this model to satisfy their workers and other stakeholders (Heck & Sweeney, 2012). The model supports both data collecting and processing. People must justify why they think one change is more significant than another; this aids in the learning process of the stakeholders. As such, the model can help provide positive change in the community (Ho et al., 2015). It is also important to note that the model's development and administration do not call for any unique professional abilities (Heck & Sweeney, 2012). MSC differs from several other approaches; for instance, in MSC, program and project workers frequently feel at ease experimenting without any prior training or experience. This is why it is commonly used among many NGOs (Bird et al., 2013).

The model is typically not built to access data on quantitative, anticipated indicators, making it less useful for capturing projected change across several stakeholders during the process. It is also not intended to record data about activities, inputs, or finances as there are various methods used to do this. The model is not designed to give any detailed information on the changes brought by any program or project. It is intended to target the most significant change rather than ordinary change (Dart & Davies, 2003).

There are other situations when the model may need a lot of money and has to be reviewed frequently by various stakeholder groups (Heck & Sweeney, 2012). MSC, like any participatory technique, can take a lot of time to implement well. Moreover, the model occasionally struggles to find information about unfavorable alterations. A domain of change that focuses especially on negative change has helped some businesses, to solve such issues. The model is also associated with bias and unreliable information since it

involves personal stories (Ho et al., 2015).

The evaluation framework offers a detailed description of the evolution methods that can be used in different evaluations. From the framework, it is clear that the evaluation methods can be used in any evaluation, but there are situations where one method is more appropriate than the other (Lai, De Nobile., Bower, & Breyer, 2022). For instance, qualitative evaluation methods are more appropriate in evaluations involving collecting and analyzing opinion data in social settings. The framework also showed how other aspects, such as the evaluation process, elements, and systems, are related to the evaluation methods (Dart & Davies, 2003). In particular, learning about the complex social stories and evaluation framework showcased how qualitative data can be used in different situations (Grunwald, 2009). For example, the framework indicated that qualitative evaluation is more suitable for programs rather than policies. It is important that project managers use this model when communicated unexpected changes (Ho et al., 2015).

This paper confirmed that although the model is relevant, it fails to work well in projects where change is certain. The model cannot work well among projects where project systems are based on numbers. This means that the model work best where stories are told. This is only common in qualitative models.

IV. Recommendations

It is evident from this paper that MSC has become an accepted M&E model and this is because it helps in solving social challenges despite their complexity. With differing degrees of effectiveness, it has been employed by several organizations. The use of MSC, which is a very adaptable approach, relies on the nature of the entity adopting it, as well as the sort of development effort being undertaken (Heck & Sweeney, 2012). Many organizations have made use of it in creative ways to gather and document transformation stories, for instance, the fusion of MSC with participatory video is a recent interest that has brought a lot of concern in the model. The approach uses qualitative data, but if correctly employed, it may be a very resource-intensive exercise with all the pitfalls and potential that comes with participatory techniques (Abraham & Michie, 2008). When used properly, it may offer a verified and recognized approach for utilizing and creating intentionally sampled community transformation stories (Alberto et al., 2001).

It is important that project managers use this model when dealing with unexpected changes and project outcomes. To reduce complexity involved in its implementation, the project team should involve various stakeholders in their implementation process (Heck & Sweeney, 2012). Stories convey significant information as it deals with context and complexity. Hence, this approach might be improved to solicit and incorporate the perspectives of various critics and non-participants. If improved, it can help in building a formal mechanism for implementing the insights acquired into both short- and long-term initiatives (Dart & Davies, 2003).

Project managers should use this model when dealing with changes that are not expected. This is important when managing complex changes. However, the changes should be

communicated to all the stakeholders. This is very effective when dealing with complex issues in the community. It is also important that project managers use the model to promote accountability in their projects. This is important in attracting different funders. Senior managers of the project must support this model and promote trust development (Dart & Davies, 2003).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for this article's research, authorship and/or publication.

References

- Abraham, C., & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. *Health psychology, 27*(3), 379.
- Alberto, W. D., del Pilar, D. M., Valeria, A. M., Fabiana, P. S., Cecilia, H. A., & de Los Angeles, B. M. (2001). Pattern recognition techniques for the evaluation of spatial and temporal variations in water quality. a case study:: Suquia River Basin (Córdoba–Argentina). *Water research, 35*(12), 2881-2894.
- American University. (2022). Emerging Technology Trends in M&E. <https://programs.online.american.edu/msme/masters-in-measurement-and-evaluation/resources/emerging-technology-trends-in-monitoring-and-evaluation>
- Barnett, C., & Gregorowski, R. (2013). Learning about theories of change for the monitoring and evaluation of research uptake.
- Bird, E. L., Baker, G., Mutrie, N., Ogilvie, D., Sahlqvist, S., & Powell, J. (2013). Behavior change techniques used to promote walking and cycling: a systematic review. *Health psychology, 32*(8), 829.
- Brown, S. (2007). Standardized Technology Evaluation Process (STEP) User's Guide and Methodology for Evaluation Teams. The MITRE Corporation: Bedford, MA, USA.
- Bruce, K. and Koler, A. (2016). Applying Emergent Technologies to Complex Program Evaluation from the INGO Perspective
- Bamberger, M., Vaessen, J., and Raimondo, E. (Eds.) (2016) *Dealing with Complexity in Development Evaluation*. Los Angeles. Sage Publications, Inc.

- Chen, E., Heritage, M., & Lee, J. (2005). Identifying and monitoring students' learning needs with technology. *Journal of Education for Students Placed at Risk*, 10(3), 309–332.
- Chervier, C., Piketty, M. G., & Reed, J. (2020). Theories of change and monitoring and evaluation types for landscape approaches. *Operationalizing integrated landscape approaches in the tropics*. CIFOR, Bogor, 78-88.
- Chikati, J. (2009). *Monitoring and evaluation handbook*. John Chikati.
- Choy, S., & Lidstone, J. (2010). Most significant change technique: a supplementary evaluation tool.
- Choy, S., & Lidstone, J. (2013). Evaluating leadership development using the Most Significant Change technique. *Studies in Educational Evaluation*, 39(4), 218-224.
- Coppin, P., Jonckheere, I., Nackaerts, K., Muys, B., & Lambin, E. (2004). Review Article Digital change detection methods in ecosystem monitoring: a review. *International journal of remote sensing*, 25(9), 1565-1596.
- Dart, J. J., Drysdale, G., Cole, D. A. V. I. D., & Saddington, M. A. R. K. (2000). The most significant change approach for monitoring an Australian extension project. *PLA Notes*, 38, 47-53.
- Dart, J., & Davies, R. (2003). A dialogical, story-based evaluation tool: The most significant change technique. *American Journal of Evaluation*, 24(2), 137-155.
- Davies, R., & Dart, J. (2005). The 'most significant change'(MSC) technique. A guide to its use.
- Dinshaw, A., Fisher, S., McGray, H., Rai, N., & Schaar, J. (2014). *Monitoring and evaluation of climate change adaptation: methodological approaches*.
- Ebrahim, A. (2003). Accountability in practice: Mechanisms for NGOs. *World development*, 31(5), 813-829.
- Grunwald, A. (2009). Technology assessment: Concepts and methods. In *Philosophy of technology and engineering sciences* (pp. 1103–1146). North-Holland.
- Heck, D., & Sweeney, T. A. (2012). Using most significant change stories to document the impact of the Teaching Teachers for the Future Project: an Australian teacher education story. *Australian Educational Computing*, 27(3), 36-47.
- Ho, L. S., Labrecque, G., Batonon, I., Salsi, V., & Ratnayake, R. (2015). Effects of a community scorecard on improving the local health system in Eastern Democratic Republic of Congo: qualitative evidence using the most significant change technique. *Conflict and Health*, 9(1), 1-11.
- Ho, L. S., Labrecque, G., Batonon, I., Salsi, V., & Ratnayake, R. (2015). Effects of a community scorecard on improving the local health system in Eastern Democratic Republic of Congo: qualitative evidence using the most significant change technique. *Conflict and Health*, 9(1), 1-11.
- Holte-McKenzie, M., Forde, S., & Theobald, S. (2006). Development of a participatory monitoring and evaluation strategy. *Evaluation and program planning*, 29(4), 365-376.
- Howes, M. (1992). Linking paradigms and practice: Key issues in the appraisal, monitoring and evaluation of British NGO projects. *Journal of International Development*, 4(4), 375- 396.
- International Labour Organization. (2020). *Basic Principles of Monitoring and Evaluation*.
- Kanyamuna, V., & Phiri, M. (2019). Who said monitoring and evaluation are not rooted in firm theoretical foundations? A review of relevant literature. *International Journal of Humanities, Art and Social Studies*, 1(4), 1-22.
- Kraft, K., & Prytherch, H. (2016). Most Significant Change in conflict settings: staff development through monitoring and evaluation. *Development in Practice*, 26(1), 27- 37.
- Lai, J. W., De Nobile, J., Bower, M., & Breyer, Y. (2022). A comprehensive evaluation of the use of technology in education—validation with a cohort of global open online learners. *Education and Information Technologies*, pp. 1–35.
- Limato, R., Ahmed, R., Magdalena, A., Nasir, S., & Kotvojs, F. (2018). Use of most significant change (MSC) technique to evaluate health promotion training of maternal community health workers in Cianjur district, Indonesia. *Evaluation and program planning*, 66, 102-110.
- Lunch, C. (2007). The Most Significant Change: using participatory video for monitoring and evaluation. *Participatory learning and action*, 56(1), 28-32.
- Morawska, L., Thai, P. K., Liu, X., Asumadu-Sakyi, A., Ayoko, G., Bartonova, A., ... & Williams, R. (2018). Applications of low-cost sensing technologies for air quality monitoring and exposure assessment: How far have they gone? *Environment international*, 116, 286- 299.
- Nirmala, G., Pankaj, P. K., Kumar, R. N., Shankar, K. R., & Anshida, C. N. (2022). *Concepts and Principles of Monitoring and Evaluation. Tools on Monitoring, Evaluation and Impact Assessment of Rainfed Agricultural Programs*, 9.
- Rabie, B., & Cloete, F. (2009). A new typology of monitoring and evaluation approaches. *Administratio Publica*, 17(3), 76-97.
- Raftree, L., and Bamberger, M. (2014). *Emerging*

Opportunities: Monitoring and Evaluation in a Tech-enabled World. The Rockefeller Foundation.

UNDP. (2013). Innovations in Monitoring & Evaluating Results. Retrieved from: <http://undp.org/content/undp/en/home/librarypage/capacity-building/discussion-paper-innovations-in-monitoring-evaluating-results.html>

Wilder, L., & Walpole, M. (2008). Measuring social impacts in conservation: experience of using the Most Significant Change method. *Oryx*, 42(4), 529-538.

Willets, J., & Crawford, P. (2007). The most significant lessons about the Most Significant Change technique. *Development in Practice*, 17(3), 367-379.

Winder, A. (2021). Innovations in Monitoring and Evaluating Results. <https://nec.undp.org/sites/default/files/2021-07/Innovations%20in%20M%26E%202013.pdf>

World Health Organization. (2016). Monitoring and evaluating digital health interventions: a practical guide to conducting research and assessment.

Yassin, N. I., & Houbay, E. (2022). EM Image Steganography Technique Based on Integer Wavelet Transform Using Most Significant Bit Categories. *Int.J. Intell. Eng. Syst*, 15, 499-508.

Yiannis, B. (2000). Technology Evaluation.