

Effect of Management Practices on Project Success in Rwanda: A Case Study - Beneficiaries of Projects Funded by Compassion International in Nyagatare District

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Abstract: *Since many decades the term management has evolved from the general view to various theories and practices. In this context, project planning in the length of development of functional requirements, development of technical specifications and implementation of project management processes and procedures have been identified as the prerequisites or pillars of projects success and when reinforced by management practices namely appropriate project governance structures, standardized and integrated processes, and the utilization of performance metrics. Furthermore, when contextualized on the project characteristics namely its temporarily nature, unique deliverables or capability to perform a service and its progressive elaboration. This is a set of process structured to close the gap between strategy planning and execution by ensuring the implementation of the most valuable initiatives. This study analyzed the effect of management practices on project success in Rwanda observed on beneficiaries of projects funded by compassion International. The study covered 25 Compassion International funded projects in Nyagatare District. The purpose of this study aimed to analyze the effect of management practices on the success of projects sponsored by Compassion International in Nyagatare District of Rwanda. The specific objectives were: To determine the effect of planning; To assess the effect of management practices and to find out the effect of project characteristics. In this study, the existing literature on management practices and their use on project success have been reviewed and the check list had been used to collect information from the various literature and the organization database “compassion connect” from 25 projects located in Nyagatare where management practices have been applied. The data analysis had been done using the software Stata 14. The study had come up with conclusion and recommendations.*

Keywords: Project, Management practices, Project Success

1. Introduction

In order to increase the chances of a proposed project succeeding, it is necessary for the organisation to have an understanding of potential risks, to systematically and quantitatively assess these risks, anticipating possible causes and effects, and then choose appropriate methods of dealing with them. To ensure that any potential risks are managed effectively, the risk process needs to be explicitly built into the decision-making process (Ahsan &Guawan, 2010). Applying principles of risk management supports the quality improvement and improves cost estimation by identifying and mitigating potential risks before a project begins. Risk management puts processes in place to ensure management receives organized risk information early enough to apply corrective actions that will allow realistic schedule and cost estimates and assure successful completion of the project. Risk management principles increase team involvement by providing a mechanism for the reporting of potential problems and increasing the team’s stake in the overall success of the project. The embedding of risk is a long-term exercise to ensure that risk consideration is at the heart of the decision-making process (Alzahrani and Emsley, 2013).

2. Statement of the Problem

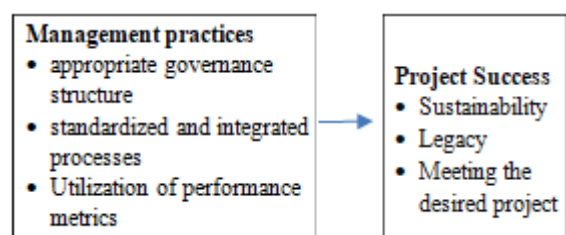
For many years, the project success has been measured through criteria of timely completion, maintaining the project costs within budget, and meeting the performance and quality requirements set out in the specification (Wang, Liu, & Gao, 2019). Moreover, other criteria have been

revealed important for qualifying a project as successful, these are safety, sustainability, reliability, legacy (long – term performance) and meeting the desired project benefits (Chih & Zwikael, 2015). Management practices comes in to bridge the gap. This is defined as a collective set of processes and practices for identifying the benefits and aligning them with formal strategy, ensuring benefits are realized as project implementation progresses and finishes, and that the benefits are sustainable – and sustained – after project implementation is complete (Madlung, 2015).

3. Objectives of the Study

The general objective of this study was analyze the effect of management practices on the success of projects sponsored by Compassion International in Nyagatare District of Rwanda. Its second specific objective was to assess the effect of management practices that participate in the specific management practices with those which do not participate based on their desired planned outcomes.

4. Conceptual Framework



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5. Research Methodology

- **Research Design:** The researcher used descriptive research design
- **Target Population:** The targeted population was composed by the data of 25 project funded by CIRW. This study will be focusing on all projects (ICPs) located in Nyagatare Districts from the Eastern province of Rwanda.
- **Sample size:** All 25 projects located in Nyagatare District have been considered.
- **Data Collection tools:** In this study, both primary and secondary data have been collected using, interviews, group focus discussion, desk research and a designed check list which helped in a systematic extraction of key information from online compassion data base “compassion connect – salesforce application”.

6. Summary of Research Findings

6.1 Description of projects

All 25 projects analysed are in Nyagatare District. The 5 participants and 20 non-participated are almost neighbours, they do have many similarities which make them favourable for this research. Briefly some key comparison data are as follow:

Table 1 show the project beneficiaries who were concerned with this study grouped into two main categories which are projects intentionally experienced management practices and the ones which did not. The average range years of birth is 9 – 19 years in participating projects where in non-participating project the average is 9 – 16 years. The number of males’ beneficiaries is relatively high with an average range of 130 – 160 and females are in the range of 126 – 152 in participating projects whereas in non-participating project the difference is not high, the average number of males is ranging between 127 – 151 and for females it is in the range of 127 – 148. This means that the beneficiaries registered in participating projects are older and there are no big differences in numbers of females and males which is different from non-participating projects which have very young beneficiary and most of them are males.

Table 1: Distribution of beneficiaries from participants and non-participants projects by age and gender

	Variable	Obs.	Mean	Std. Dev.	Min	Max
Non-Participant	Age	504	12.75794	3.392328	5	22
Participating	Age	580	13.92414	4.637584	5	28
	Sex(Male)	504	138.6508	12.13546	89	144
Non-Participating	Sex(Female)	504	137.2738	10.50175	104	142
Participating	Sex(Male)	580	147.6672	17.24029	94	163
	Sex(Female)	580	138.8517	12.68233	100	148

Table 2 shows that the participating projects got training on management practices and use more their plans for both projects and their facilitator in their daily work compared to non-participating projects. They had opportunity of trainings and have their strategy. This means that they are good in managing their projects based on well recorded strategies and standards.

Table 2: Comparison of Availability and usage of plan and strategy, the age and the size of projects

	Indicator	Mean	Std. Dev.	Min	Max
Non-Participant	Plan Use_Partner	0.182	0.729	0	14
	Plan Use_Facilitator	0.029	0.203	0	3
	Training on Management Practice	0.000	0.000	0	0
	Having strategy	0.000	0.000	0	0
Participant	Plan Use_Partner	0.772	3.889	0	62
	Plan Use_Facilitator	0.758	4.685	0	78
	Training on Management Practice	4.000	0.000	4	4
	Having strategy	0.996	0.060	0	1
Non-Participant	Ageproject	8.053	5.191	4	19
Participant	Ageproject	8.429	5.912	3	20
Non-Participant	Size project	236.65	30.23	193	286
Participant	Size project	245.57	46.58	178	298

6.2 Comparison of projects applied management practices and their counterfeit on desired planned outcomes

Table 3 below shows that there is no difference in transfers and unplanned exits for non-participating and participating projects. It shows also that these practices had a significant effect on the number of children who performed well with the mention above average. This means that the management practices can increase the school performance of the project beneficiaries

Table 3: Indicators on Children exit and school performance

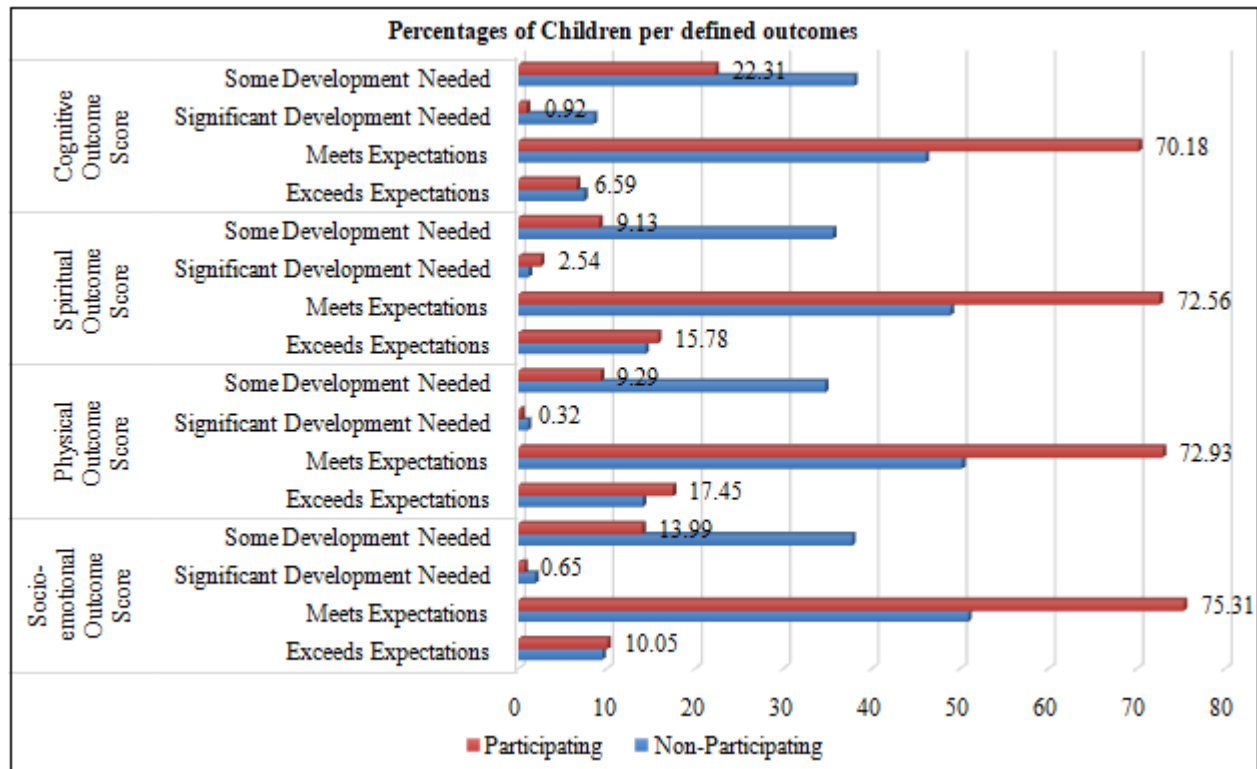
Children-indicators		Non-Participant	Participant
	Transfers	86.31	86.55
Exit	Unplanned Exit	13.69	13.45
School performance	Below average	1.19	1.75
	Average	98.21	91.43
	Above average	0.6	6.82

Table 4 and graph below show that children in all aspects of outcomes namely socio-emotional, physical, spiritual and cognitive have met the expectations on 75% and above for participating projects with a big difference compared to the non-participating projects. this means that the management practices namely management practices contributed a lot on these results.

Table 4: Percentage of children on planned outcomes

		Non-Participating	Participating
Socio-emotional Outcome Score	Exceeds Expectations	9.49	10.05
	Meets Expectations	50.89	75.31
	Significant Development Needed	1.87	0.65
	Some Development Needed	37.75	13.99
Physical Outcome Score	Exceeds Expectations	14.05	17.45
	Meets Expectations	50.2	72.93

	Significant Development Needed	1.04	0.32
	Some Development Needed	34.71	9.29
Spiritual Outcome Score	Exceeds Expectations	14.37	15.78
	Meets Expectations	48.9	72.56
	Significant Development Needed	1.13	2.54
Cognitive Outcome Score	Some Development Needed	35.59	9.13
	Exceeds Expectations	7.43	6.59
	Meets Expectations	46.08	70.18
	Significant Development Needed	8.52	0.92
	Some Development Needed	37.98	22.31



A two-sample Student test (t test) has been performed to evaluate whether there is a significant difference on outcomes of Participating and Non-participating Project in the District of Nyagatare. The null hypothesis was that the mean score for each outcome is the same for both participating and non-participating ($H_0 = \text{mean [Non-Participating]} - \text{mean [Participating]} = 0$). The results displayed in the Table below show that for each outcome,

the mean score for non-participating was significantly (at 1% level) inferior to that of participating. This indicate that, the non-participating projects tend to have more children with lower outcome scores. This lead to the decision that we reject the null hypothesis that both means are equal. From the results, it is confirmed that Participating projects have higher levels of outcomes compared to non-participating ones. This is statistically significant at 1%

Outcomes	Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	t-Value
Physical	Non-Participant	4,321	2.7	0.011	0.691	2.752 2.793	-16.9***
	Participant	1,851	3.07	0.012	0.524	3.051 3.099	
Social Emotional	Non-Participant	4,321	2.7	0.010	0.667	2.660 2.700	-15.4***
	Participant	1,851	2.9	0.012	0.514	2.924 2.971	
Spiritual	Non-Participant	4,321	2.8	0.011	0.700	2.744 2.786	-13.5***
	Participant	1,851	3.02	0.014	0.592	2.989 3.043	
Cognitive	Non-Participant	4,321	2.52	0.011	0.754	2.502 2.547	-15.5***
	Participant	1,850	2.82	0.013	0.543	2.800 2.850	

***: Significant at 1%

$H_a: \text{diff} < 0$

$H_a: \text{diff} \neq 0$

$H_a: \text{diff} > 0$

$\text{Pr}(T < t) = 0.0000$

$\text{Pr}(|T| > |t|) = 0.0000$

$\text{Pr}(T > t) = 1.0000$

6.3 The relationship between projects' characteristics and the achievement of their planned outcomes

6.3.1 The project has a strategy

A Chi-square test of independence has been performed to analyze the relationship between "Having a strategy" and

achievement of cognitive outcomes of the projects. The test was found significant at 1% with the Cramer's value of 0.3195. This indicated that the variations in the outcome levels were significantly explained by having a strategy or not among the projects. To be able to evaluate what exactly

explained this variation, a proportion test was done with a focus on the percentages (proportions) of the projects which met the expectations in the outcome of interest. The null hypothesis was that the proportion of those who met the expectations for participating equals that of the non-participating ($H_0 = \text{prop} [\text{Non-Participating}] - \text{prop} [\text{Participating}] = 0$). The results displayed in the Tables below show that for each outcome, the proportion for non-participating was significantly (at 5% level) inferior to that of participating. This indicate that, the projects in non-participating groups have lower percentages of the scores in terms of achieving the expected outcomes. This lead to the decision that we reject the null hypothesis that both proportion are equal are equal. From the results, it is confirmed that Projects which have a strategy are likely to achieve their planned cognitive outcomes for children. Following the same proportion test, “Having a strategy” was also found significantly important for the achievement of Socio-emotional and Spiritual outcomes. However, there was no significant relationship between having a strategy and achieving physical outcomes.

Table 5: Physical outcomes realization

Group	Significant development	Some development needed	Meets Expectation	Exceeds expectation	Total
No	61.8	1.8	33	15	111.6
	91.11%	53.39%	37.69%	70.22%	49.77
Yes	61.2	1.8	34	14.8	110.6
	8.89%	46.61%	62.31%	29.78%	50.23
Total	123.1	3.6	65.7	29.8	222.2
	100%	100%	100%	100%	100

The project uses the strategy	Significant development	Some development needed	Meets Expectation	Exceeds expectation	Total
No	142.9	0.6	36.7	10.8	191
	42.6	18.01	12.89%	23.15	17.28
Yes	29.8	0.1	7.7	2.3	39.9
	57.4	81.99	87.11%	76.85	82.72
Total	172.7	0.8	44.3	13	230.9
	100	100	100	100	100

Pearson $\chi^2(3) = 230.8790$ Pr = 0.000, Cramér's V = 0.1919

6.3.3. The Project facilitator regularly consult the strategy

The results of Chi-square test of independence between the cognitive outcomes and the fact that the Project facilitator (PF) regularly consult the strategy are presented in the Table below. The projects whose PF have not regularly consulted the “Strategy” had lower proportion in terms of achieving the expected outcomes in Cognitive and other outcomes except for the physical outcomes. In all the cases, the null hypothesis was that the proportion of those who met the expectations for participating equals that of the non-participating ($H_0 = \text{prop} [\text{Non-Participating}] - \text{prop} [\text{Participating}] = 0$) has been rejected.

Pearson $\chi^2(3) = 222.1624$ Pr = 0.000, Cramér's V = 0.3195
 diff = prop(x) - prop(y)
 Pr(|Z| > |z|) = 0.0347

6.3.2 The project regularly consult the strategy

A Chi-square test of independence has been performed to analyze the relationship between “Regularly consulting the strategy in the implementation” and achievement of the outcomes. The table above shows the results from the analysis of relationship with cognitive outcomes of the projects. The test was found significant at 1% with the Cramer’s value of 0.1919. This indicated that 19% variations in the outcome levels were significantly explained by regularly consulting the strategy or not. To be able to evaluate what exactly explained this variation, a proportion test was done with a focus on the percentages (proportions) of the projects which met the expectations in the outcome of interest. The null hypothesis was that the proportion of those who met the expectations for participating equals that of the non-participating ($H_0 = \text{prop} [\text{Non-Participating}] - \text{prop} [\text{Participating}] = 0$). The results displayed showed that, the proportion of those who achieved the planned outcomes was significantly lower at 1% level ($z = -4.1589$) compared to those who regularly checked their strategy. This lead to the decision that we reject the null hypothesis that both proportion are equal. From the same tests, it was also confirmed that consulting the strategy for projects is significantly related to the Socio-emotional and Spiritual outcomes. However, there was no significant relationship between having a strategy and achieving physical outcomes.

Table 6: Physical outcome tested with chi-square test

PFU self1	Significant development	Some development needed	Meets Expectation	Exceeds expectation	Total
No	142.9	0.6	36.7	10.8	191
	42.6	18.01	12.89%	23.15	17.28
Yes	29.8	0.1	7.7	2.3	39.9
	57.4	81.99	87.11%	76.85	82.72
	172.7	0.8	44.3	13%	230.9
Total	100	100	100	100	100

For Physical outcomes, the results indicated that all the indicators namely “Having a strategy”, “The project users having regularly consulted the strategy” and “the PF having regularly consulted the strategy” had no effect. Therefore, we failed to reject the null hypothesis and concluded that, the proportion of those who achieved the planned physical outcomes did not differ between those who used the indicators and those who did not. With reference made to the above analysis made, the project above named participant have significantly performed well. The effect of the management practices on project success have been tested

and confirmed in this research that the projects applied these management practices named participants are likely to meet their success compared to others which did not applied the above-mentioned practices (non-participants). After the analysis of sustainability supported by the above data on the outcomes meet; projects beneficiaries confirmed handouts and funds got helped them to meet their present needs but also built their capacity for surviving even after ceasing benefiting from their respective projects like domestic animals, houses built, land bought, income generating activities opened and other handout got from the projects.

The participant projects shown the demonstrated effective mechanism being used to disseminate the lessons learnt on one project which confirmed their legacy as one of the indicator of the project success. This project legacy includes models, designs, specifications, educational materials produced to communicate about the product to various stakeholder groups (e.g. Primary beneficiaries, sponsors, the public). On the process, this means new learning, understanding or capabilities that improve the organization's ability to conduct future projects. This study showed how using management practices has gave the opportunity to these projects of applying their best practices in dealing with the current issues and what have been efficiently produced. The participant's projects have been able to disseminate the lessons learnt on their project. This means new learning, understanding or capabilities that improve the organization's ability to manager well their project which gave them the opportunity of applying their best practices in supporting other similar who lagged in applying management practices with their current issues. These participants project are doing a great job in helping others to increase their capacity of being proactive using the new technologies applied by Compassion. The proactivity is based on reviewing their plans and initiating best management practices, with help of the use of the advanced technology from the grassroots level up to the top.

7. Conclusions and Recommendations

7.1 Conclusions

In recent years, organizations have come under increasingly pressure to ensure that investment in change realizes the expected benefits. This challenge has been heightened by adopting a more strategic approach to benefits management, organizations can address this challenge. It is in this vision that some projects funded by compassion international decided to introduce these practices in their project management.

The results showed that the management practices can significantly improve the project management and lead it towards to their success. It is confirmed that Projects which opted these practices experienced a high of defining the company future competitive big picture, established strategies and plans which were able to capture in single detail their daily required work needed to be done for better taking them to the ultimate goal of achieving their planned activities with great value and sustainable and leave the legacy behind in the lives of all projects stakeholder of which have a strategy are likely to achieve their planned

cognitive outcomes for children. The study showed a significant change and positive results in the participating projects compared to non-participating projects.

7.2 Recommendations

The study only covered the Nyagatare District of the Eastern province of Rwanda and it may be useful to do the same research in other districts were compassion operates to have the general view of the country. In addition, other researches may complement this one for the same purpose of increase the rate of the successful projects funded by Compassion International through the application of management practices. The following are the suggested area of further research:

- a) To conduct more studies on management practices in organizations which operates in social – welfare focusing on poverty eradication. This would contribute on poverty eradication with sustainable outcomes and leave a strong legacy to all stakeholders.
- b) To assess the implication and the benefits of having a regulatory agency tasked to monitor the project success in terms of sustainability and legacy in all governmental and non-governmental undertaken project.

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