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# Team Work as a Vital Element for Outstanding Outcome: A Case Study in a Ghanaian Mine

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#### **Abstract**

Validly, this case study shows that, team work is an undeniable route for resolving problems for business improvement. It provides the key to higher productive target achievement and competitive advantage. The case studied exposed the reality of team development as forming-storming-norming-performing-adjourning model depicts. Clearly, the paper identified success factors of the team as common language, use of prototype and shared experience. Notably, the tools for generating useful team contribution were identified as cooperative mind-set, boundary spanning, igniting purpose and productive capacity. The technics that fueled the team's achievement were innovation, creativity and interpersonal relationship. Consequently, the team was able to redeem the short term lack of standard 12 mm aperture screen effect on production. The paper endorsed team work as a better route for saving the company invaluable thousands of dollars in terms of direct and indirect cost.

### **Keywords**

Team Work, Cooperative Mind-Set, Boundary Spanning, Igniting Purpose, Productive Capacity, Aperture and Screen

#### 1. Introduction

Team is managerially defined as any group of people who must significantly relate with each other in order to accomplish shared objectives [1]. In other words, a team is a cohesive coalition of people working together to achieve mutual goals. Teams differ from one another by virtue of their membership goal focus and type of goal. Examples such variable goals are presentation, discussing a topic, writing a report, creating a new design and winning of Olympic medal. [2], defines work as something that involves physical or mental effort, especially as part of a job. Therefore, team work implies group of people doing things that

involves physical or mental effort by relating with each other in order to achieve shared objectives. The phrase vital element for outstanding outcome means essential ingredient for excellent result in a given endeavour. This implies, the vital factor or element for achieving outstanding result is a cohesive coalition of people pulling resources together towards the achievement of common goal. The aim of this paper is to provide the needed information and tools to enhance team work in the Ghanaian Mine under research. The paper will also equip members with the needed techniques to work towards generating useful contribution to overcome the lack of working apparatuses. Another important focus of this article is to provide the members of the Mine the tools for business improvement.

# 2. The Case That Call for Team Work at the Processing Plant of the Ghanaian Mine

Team work is a tool for solving various problems in all areas of life endeavour. At the Processing Plant, almost all problems are solved by team work. One example is lack of screens for size analysis at the laboratory section of the Plant which was resolved by a team of three members. This lack of screen came up as a result of introducing a new Pebble Crusher which product size was different from previously crushed product. From test work conducted by company's technical section, the criticality of the Pebble Crusher required product size fraction lies in the fact that, the mineral of interest can only be liberated at a tested size fraction of 80% passing 12 mm [3]. The relation between liberation of the mineral of interest and product particle size fraction call for immediate resolution of the lack of sizing screen problem at hand to overcome the overall production deficit consequence. Clearly, test work has shown that, particles size relates in an inverse function mode with mineral of interest liberation. That is the coarser the particle size the lower the quantity or amount of mineral of interest liberated [4]. In solving this problem, a team was formed to improvise a 12mm screen for analysis of the pebble crusher product until the procurement of a standard screen. Team members for the projects were: Obiri-Yeboah James (Metallurgical Superintendent who came out with the design), Abraham Kwofie (Boiler maker foreman) and Godson Akrobetto (Boiler maker Leading hand). Through team work these employees fabricated the designed 12 mm aperture screen.



The picture above shows the said team with the fabricated improvise 12 mm aperture screen. They are from left to right: Obiri-Yeboah James, Godson Akrobetto and Abraham Kwofie. Clearly, team members are motivated by being valued and having the opportunity to apply their professional skill to meet new challenges. The picture depicts an intangible value placed on the team's achievement by the Ghanaian Mine [5] [6]. The expression of joy and satisfaction of team members in the picture, authenticates the motivation gained by being valued for achieving a set target as solution to the sizing screen challenge that confronted the Ghanaian Mine in this study. The fabricated sizing screen components are circular vertical and flat base sections with a ring seat. The circular vertical section has a height of 100 mm fixed to 450 mm flat base diameter with perforated apertures of 12 mm diameter each. The ring seat under the flat base has a height of 30 mm, providing a receptacle for under size product during shaking process.

#### 3. Factors for the Successful Team Work

Three basic Factors for the successful team were common language, usage of prototype (Example), shared experience. The common language factor relate to team members' focus on decision making towards the set target. The availability of different aperture screens at the Ghanaian Mine's Laboratory, provided the needed prototype usage for the team. The cross functional (Metallurgical and Mechanical domains) insight of the team, enhanced the needed shared experience. Realistically, the positive team experiences resulted out of useful individual personal abilities to enhance the entire team's effectiveness and knowing that being on a good team isn't random but a function of one's relationship with others. The resultant successful outcome was gained out of the fact that each member of the team was with the mindset of taking personal responsibility for the quality team relationship. This is a prove of the general acceptable fact that the single most important thing one can do to increase ones value, regardless of one's level of authority, lies in becoming skillful in collaborating with others towards the achievement of a common goal [7].

Incontrovertibly, common language is achieved in an atmosphere of respect and open communication where views are shared among all team members. One character that enhanced respect and open communication which led to the case team's achievement was the notion that no idea on the given target was considered useless. This authenticates the fact that, running a team requires members' engagement in discussion more than argument. Basically, successful teams usually learn and use examples or prototypes to enhance the achievement of a given target [8]. This supports the sayings that, "there is nothing new under the sun". The design was made out of already available screen of different aperture size. That is positive points of advantageous positions were emphasized and agreed on towards the building of synergy. Another basic ingredient of the successful team was sharing of experience. The sharing of experiences helped the team to map the best line of action to achieve the given target. This helped the

team to avoid a repetition of mistakes by placing premium on relevant skills and experience that relate to the target. In this direction, the team combined Metallurgical design skills and Boilermaker fabricating skills and experience to achieve the set target.

# 4. Tools and Technics for Generating Useful Contribution in Team Work

Clearly, cooperative mind-set, boundary spanning, igniting purpose and productive capacity were the tools for enhancing individual's contribution in team work. Cooperative mind-set is the innovation ability of a working group of people. Notably, technics of innovation, creativity and interpersonal relationship were the elements which fueled the team to attain uncommon results. Boundary spanning factor is a network of relationships occurring across the team's functional capabilities whiles ignition purpose is the activation of the team's imagination towards the set vision. Interestingly, ignition purpose enhances cooperative mind-set by eliminating the setback element of the team. Building productive capacity as a tool for generating useful contribution in team work, place premium on appreciating talents of others, learning to be creative, keeping commitments and resolving conflict. These working relation characteristics shape attitudes of group members [9]. It was noted that, the team of the Ghanaian Mine in this research gained cooperative mind-set out of the working group's level of experience, aptitude, perception and tolerance. In fact, the team's cooperative mind-set was born out of excellent relationship, led to the generation of intellectual, emotional and social capitals. These elements of human capital depend on the effort of members' acceptance of one another's view. Additionally, boundary spanning factor as a tool for enhancing individual contribution in the team was generated out of the team's network across functional boundaries of metallurgy and fabrication experiences of the team members and consultation of friends in other companies outside the Ghanaian Mine under this research. The team's technics of innovation, creativity and interpersonal relationships bring about value creation through internal exploitation of shared expertise of ideas, knowledge and insight. Consequently, the team's focus on target of improvising equipment to redeem the short term lack of standard 12 mm aperture sizing screen, generated the needed igniting purpose towards the needed productive capacity.

### 5. Challenges of the Team Formation

Being in a team does not equate to a total suppression of personal agendas, but it does require a commitment to the vision and involves each individual working toward accomplishing the team's objective [10]. This was the hallmark of the team's day-to-day practices towards the achievement of the overall goal. That is, the team of the Ghanaian Mine being studied, was able to accomplish the team's objective of improvising a screen to overcome the prevailing problem without being detracted from individual member's daily scheduled jobs.

Invariably, the team had to go through the five major steps of change to attain maturity or equilibrium state. The group evolved through the forming-storming-norming-performing-adjourning model [11] [12]. According to the model, a group progresses to the performing stage, at which point it finds itself in an ongoing, smooth-sailing situation until the group dissolves. In reality, researchers, most notably, [13], pointed out that, the life of a group is much more dynamic and cyclical in nature. For example, a group may operate in the performing stage for several months. Then, because of a disruption, such as a competing emerging technology that changes the rules of the game or the introduction of a new member, the group may move back into the storming phase before returning to performing. Ideally, any regression in the linear group progression will ultimately, result in a higher level of functioning. However, in the event of interference, the team's focus of definitive future target can be distorted.

#### 6. Conclusion

In conclusion, the strength of the successful team to obtain an excellent fruit lies in the effective combination of diverse skills and experiences towards a given objective. Also, it is imperative to pay attention to common language and prototypes available to enhance optimum performance. The team did not escape the challenges of team development unto maturity. Conspicuously, the driving forces for achieving the uncommon result were cooperative mind-set, boundary spanning, igniting purpose and productive capacity. Commendably, the example set at the Process Plant of the Ghanaian Mine in this research, came at an appropriate time when cost effectiveness was paramount to offset unfavorable consequences of decreased gold price (i.e. a decrease of gold price from above \$1500.00/oz to below \$1200.00/oz) at the world market during the research period. The limitation of the improvised 12 mm sizing screen was its lower capacity due to the lower number of aperture per unit area as compared to the conventional sizing screen. Finally, the fabricated 12 mm screen saved the company invaluable thousands of dollars in terms of direct and indirect cost which enhanced the sustainability and continuous improvement measures of the company.

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