[redacted]

Upon completion of this unit, students should be able to:

5. Describe the process of leadership when leading project teams.
   5.1 Identify some of the causes for variances during the execution phase of a project.
   5.2 Determine the steps that a project manager and project team will take to account for variances and get a project back on track.

Reading Assignment

Chapter 17: Execution and Control

Unit Lesson

The executing process group consists of the processes required to complete the work defined in the project management plan and ultimately satisfy the project specifications and objectives. Processes in this group are utilized to organize project team and resources, to manage stakeholders' expectation, and to integrate and perform project activities in accordance with project management plan. In this process group, work is actually carried out such as the following: code is written, parts are assembled, information is distributed, houses are constructed, the team is developed and managed, and roads are repaired.

The project executing process group includes the following processes in the specified knowledge areas:

Process Groups	Processes	Key Outputs
Project integration management	Direct and manage project work	Deliverables Work performance data
Project quality management	Perform quality assurance	Change requests
Project human resource management	Acquire project team Develop project team Manage project team	Project staff assignment Resource calendars Team performance Assessments Change requests
Project communication management	Manage communications	Project communications
Project procurement management	Conduct procurements	Selected sellers Agreements Resource calendars
Project stakeholder management	Manage stakeholder engagement	Issue log Change requests

(PMI, 2013)

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Findings made by the team in the executing process group may require preplanning and re-baselining the project management plan and project documents, including changes to activity durations, resource availability, and unanticipated risks. Regardless of how detailed a plan may be and how many experts have proofed the plans, there will be changes. Change orders may originate from either the owner or the contractors. These changes interrupt the flow of the project and can cause delays. It is important for all parties involved in the process to be clear in communications and expectations. Change orders need to be held to a minimum in the best interest of all parties involved.

Usually the project will enter the executing process group when planning is completed or the project management plan has been updated due to change requests, including defect repairs and corrective and preventive actions. The approved change requests, which consist of corrective actions, preventive actions, and defect repairs are typically implemented in this process group.

- *Corrective Actions:* Actions that are taken to bring expected future performance of the project work in line with the project management plan.
- *Preventive Actions:* Actions that are taken to reduce the probability of risk items in the project.
- *Defect Repairs:* Actions that are taken to repair defects or entirely replace components that are faulty or dysfunctional

Costs are usually high in this process group, as this group will utilize most of the project time and resources. Project managers and their teams typically face significant conflicts and challenges over schedules during the executing phase.

The primary outputs of the project executing phase are as follows:

- Deliverables—Any unique and verifiable product, result, capability, or service that must be produced in order to complete a process, phase, or project.
- Work Performance Data—Information on how far along a deliverable is and how it is progressing against the plan is routinely collected as the project progresses. There can be several work performance data of interest in the project such as the following:
  - deliverable status,
  - schedule progress,
  - resource utilization,
  - key performance indicators,
  - costs incurred,
  - number of defects, and
  - quality standards.
- Change Requests—Approved change requests may require implementation of preventive and corrective actions and may also modify policies, the project management plan, guidelines, procedures, costs, and the schedule baseline.
- Project Management Plan Updates—Most of the elements of the project management plan will be updated in this process.
- Project Documentation Updates—Documents such as requirements documents, the risk register, the stakeholder register, project logs (issues, assumptions.) may be updated (Project Management Institute [PMI], 2013).

As the project team executes the project management plan, variances are bound to occur given the changes in the triple constraints (scope, time, & cost). A variance is the difference between what you planned to achieve and the actual achievement. For example, you planned that the house would cost $500,000 to complete in 24 months. As the project team started to build the house, they noticed that the housing materials are more expensive than what was originally planned and that is taking them more time than expected to get county permits and inspections thus delaying the house completion by an extra three months. Now the house will cost $560,000 and will take 27 months to complete. The process that the project team takes to ensure that project execution does not deviate from planned actions (and to bring it back when it deviates) is known as the control process. There are four primary steps to control process:

1. *Effective Planning*—Without a robust project management plan indicating core milestones with corresponding activities and measures, it will be hard to monitor when there is a deviation and therefore impossible to monitor. When the project has a project baseline plan that is concise, agreed

upon and measurable, the team is better able to control any deviation. Effective plan includes the identifications of activities with their corresponding time of completion and cost attributes.

2. *Effective Reporting*—An important element of the controlling process is the ability to report deviations accurately and in a timely manner so that project stakeholders can make an informed decision. Therefore, effective reporting requires that the report be made against the approved plan with a clearly defined criteria for control. The control reporting techniques and tools should be simple for the project team to allow ease of reporting so that the project team does not waste excessive time reporting that might impact project schedule. Another important element of effective reporting is that the project team should submit their reports at defined intervals. These intervals are linked to the project milestones so that the reports can be meaningful and measurable. Finally effective reporting should be discussed at formal meetings and should stimulate creative project team and stakeholders discussions.

3. *Effective Reviews*—During the monitoring process, the team must review the variance data to ensure that the variances are reflected correctly and based on their review and analysis, then propose a control mechanism. Bear in mind that the two most quantitative project measures are time and cost; therefore, effective review of the cost/time generated data ensures effective control. When data are effectively reviewed, the right resources would be aligned. However, when the project team fails to conduct an effective review of the project data, the root causes are missed, and limited project resources are wrongly assigned with zero impact on control.

4. *Effective Action*—Once the review is completed through the validation of variances, the project manager and his or her team must now decide on the appropriate actions to take. Effective action requires that the team respond accordingly by not overreacting or under-reacting. The goal of effective action is simply to apply a control mechanism to bring back the variances to align with the project plan.

Reference

Project Management Institute. (2013). *A guide to the project management body of knowledge* (5th ed.). Newton Square, PA: Project Management Institute.