Sample Answers to In-Text Questions

# Module E: Learning Curves

## Discussion Questions

1. Explain the learning curve phenomenon.

Answer: As workers repeat their tasks, the time it takes to do it decreases. Workers learn, and the process also gets better.

1. Why are learning curve effects not particularly significant in mass production systems?

Answer: Mass production systems typically have fewer workers, and more automation, therefore the worker plays less of a role in the process.

1. What are the factors that determine the extent to which learning occurs?

Answer: The amount of worker to machine ratio, different systems yield different opportunities, lastly the amount of stabilization in the process.

1. Why is it easier to apply the learning curve concepts in a manufacturing rather than in a service setting?

Answer: It is because there is more variability and less repetition in a service environment, and services are more intangible, and less straightforward.

1. Discuss some of the areas where applications of learning curve concepts have been found useful.

Answer: They have been used in planning, budgeting, negotiation with suppliers, and product pricing. Etc. You can also evaluate your operations, and measure the amount of learning, and efficiency taking place.

1. Discuss why more learning occurs at a 70% learning rate than at an 80% rate.

Answer: It is because at the 80% rate, the process is newer, and you have not produced enough to have learning experiences, found out the problems and shortcuts yet.

1. Why do learning curves flatten out as the number of repetitions of task increases?

Answer: It is because of the law of diminishing returns. After you have learned a process quite well, the amount of improvements becomes smaller per unit.

1. What are some limitations of learning curves?

Answer: Companies can vary, learning curves are only estimates, in mass production there is fewer worker %, and they are mostly restricted to direct labor and materials.

1. What factors might cause a learning curve to peak upward as the number of repetitions increase?

Answer: In the long run, changes to workers or job design may alter the learning curves, causing a temporary upward spike in the curve. The workers may become careless, and there may be a requirement for more resources as the volumes increase.

1. Can you think of some circumstances where a manager may want no learning to occur?

Answer: In a mass production line there is typically little room for learning. Also there should be a prioritization of learning efforts where they would do the most good, and others ignored initially. In a changing process, less learning can take place.