Pearson BTEC Level 4 Higher Nationals in Business (RQF)

Unit: 4

Assignment 2:

Information Pack

Learning Outcomes 3 & 4

Management and Operations

INTRODUCTION

The aim of this unit is to help students understand the difference between the function of a manager and the role of a leader. Students will consider the characteristics, behaviours and traits which support effective management and leadership. In addition, this unit will introduce the concept of operations as both a function and a process which all organisations must adopt to conduct business. Students will be introduced to contemporary and historical theories and concepts which will support their learning for this unit.

On successful completion of this unit students will have developed sufficient knowledge and understanding of how management and operations make a positive, efficient and effective contribution to an organisation at a junior level. This could be in the role of a team leader or managing a specific aspect of an operation function and/or process.

The knowledge, understanding and skill sets gained in this unit will help students to choose their own preferred areas of specialism in future studies and in their professional career.

This information pack is designed to give you the information and guidance that you will need to complete your assignments for this unit. In particular this information pack will look at the second 2 learning outcomes which make up assignment 2, these being;

LO3 Demonstrate an appreciation of the role leaders and managers play in the operations function of an organisation

LO4 Demonstrate an understanding of the relationship between leadership and management in a contemporary business environment

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GUIDANCE

This document is prepared to break the unit material down into bite size chunks. You will see the learning outcomes above treated in their own sections. Therein you will encounter the following structures;

Purpose

Explains *why* you need to study the current section of material. Quite often learners are put off by material which does not initially seem to be relevant to a topic or profession. Once you understand the importance of new learning or theory you will embrace the concepts more readily.

Theory

Conveys new material to you in a straightforward fashion. To support the treatments in this section you are strongly advised to follow the given hyperlinks, which may be useful documents or applications on the web.

Example

The examples/worked examples are presented in a knowledge-building order. Make sure you follow them all through. If you are feeling confident then you might like to treat an example as a question, in which case cover it up and have a go yourself. Many of the examples given resemble assignment questions which will come your way, so follow them through diligently.

Question

Questions should not be avoided if you are determined to learn. Please do take the time to tackle each of the given questions, in the order in which they are presented. The order is important, as further knowledge and confidence is built upon previous knowledge and confidence. As an Online Learner it is important that the answers to questions are immediately available to you. Contact your Unit Tutor if you need help.

Challenge

You can really cement your new knowledge by undertaking the challenges. A challenge could be to download software and perform an exercise. An alternative challenge might involve a practical activity or other form of research.

Video

Videos on the web can be very useful supplements to your distance learning efforts. Wherever an online video(s) will help you then it will be hyperlinked at the appropriate point.

Contents

LO3 Demonstrate an appreciation of the role leaders and managers play in the operations function of an organisation

Theories of operations and operations management

Six Sigma

ix Sigma is a quality management methodology used to help businesses improve current processes, products or services by discovering and eliminating defects. The goal is to streamline quality control in manufacturing or business processes so there is little to no variance throughout.

Six Sigma was trademarked by Motorola in 1993, but it references the Greek letter sigma, which is a statistical symbol that represents a standard deviation. Motorola used the term because a Six Sigma process is expected to be defect-free 99.99966 percent of the time — allowing for 3.4 defective features for every million opportunities. Motorola initially set this goal for its own manufacturing operations, but it quickly became a buzzword and widely adopted standard.

Six Sigma is specifically designed to help large organizations with quality management. In 1998, Jack Welch, CEO of GE, helped thrust Six Sigma into the limelight by donating upwards of $1 million as a thank you to the company, recognizing how Six Sigma positively impacted GE's operations and promoting the process for large organizations. After that, Fortune 500 companies followed suit and Six Sigma has been popular with large organizations ever since.

Six Sigma principles

The goal in any Six Sigma project is to identify and eliminate any defects that are causing variations in quality by defining a sequence of steps around a certain target. The most common examples you'll find use the targets "smaller is better, larger is better or nominal is best."

- **Smaller is Better** creates an "upper specification limit," such as having a target of zero for defects or rejected parts.
- **Larger is Better** involves a "lower specification limit," such as test scores — where the target is 100 percent.
- **Nominal is Best** looking at the middle ground — a customer service rep needs to spend enough time on the phone to troubleshoot a problem, but not so long that they lose productivity.

The process aims to bring data and statistics into the mesh to help objectively identify errors and defects that will impact quality. It's designed to fit a variety of business goals, allowing organizations to define objectives around specific industry needs.

Six Sigma methodologies

In practice, Six Sigma follows one of two sub-methodologies: DMAIC and DMADV:

Six Sigma DMAIC

The Six Sigma DMAIC project methodology includes five phases, each represented as a letter in the DMAIC acronym. These include:

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- **Define** the problem, the customer, the project requirements and the ultimate goals and expectations of the customer.
- **Measure** performance of the current process by establishing a data collection plan to determine defects and gather metrics.
- **Analyse** the process to establish root cause of variations and defects to identify issues with the current strategy that stand in the way of the end goal.
- **Improve** the process by eliminating the root causes of defects through innovative solutions.
- **Control** the new process to avoid falling into old habits and to ensure it stays on track.

Six Sigma DMADV

The Six Sigma DMADV, also known as the Design for Six Sigma (DFSS), includes five stages:

- **Define** realistic goals that suit the customer's requirements or the business strategy.
- **Measure** and identify the customer's critical to quality (CTQ) requirements and translate them into clear project goals.
- **Analyse** multiple options and alternatives for the customer along with the estimated total life cycle of the project.
- **Design** the process at a high level before moving onto a more detailed version that will become the prototype to identify errors and make modifications.
- **Verify** that the final iteration of the product or process is approved by all customers and clients — whether internal or external.

DMAIC vs. DMADV

The DMAIC and DMADV methodologies seem similar, but they have different use cases. The DMAIC methodology is designed for existing process or products that aren't meeting customers' needs or performing to standards. When a business needs to develop a product or process that doesn't already exist or when a product has been optimized but still falls short, that's when you want to use DMADV.

Determining a Six Sigma project

To find projects in your organization that would benefit from Six Sigma they need to fit some criteria:

- Each project needs to have a clear process of inputs and outputs.
- Don't go into the project with a pre-determined solution — that means you already know the fix.