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Teaching and educational notes

Modern Watch Company: An instructional resource for presenting and learning actual, normal, and standard costing systems, and variable and fixed overhead variance analysis ☆

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ABSTRACT

This paper presents an instructional resource that requires students to progress through three distinct costing approaches applied to a common data set: actual costing, normal costing, and standard costing. The resource is designed to allow students to better understand variable and fixed overhead variance analyses – in particular, the fixed overhead production volume variance. Students can complete the instructional resource either individually or in teams. The requirements of the resource give students the chance to defend a keep/drop decision by management, compare and contrast alternative costing systems, discuss some nuances across the costing systems, calculate variable overhead spending and efficiency variances as well as fixed overhead spending and production volume variances (along with a written memo to management explaining these variances), and discuss why predetermined overhead rates can make interim financial statements more reliable. Students perceived this resource as an effective learning tool that was easy to understand and that facilitated their understanding of costing systems, fixed overhead variance analysis, and the importance of predetermined overhead rates.

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1. Introduction

Costing system alternatives (such as actual costing, normal costing, and standard costing) are covered in virtually all cost accounting textbooks today. However, most such texts present these topics in separate chapters. A search of the major accounting education journals reveals a lack of materials that present all three of these options in the same scenario or that provide accounting students a direct comparison among the three alternatives.[1]

The present resource provides an integrative approach to cost-system design choices. As such, this resource responds to recent calls (e.g., Lawson et al., 2014) for increased curricular integration in accounting. We created this resource to expose students to three choices firms can use when designing a traditional cost allocation system: actual costing, normal costing, and standard costing.

The resource consists of a description of a hypothetical company. The newly hired controller of the company analyzes the inventory costing system, and quarterly and annual income statements are constructed under three costing systems – actual, normal, and standard costing. This resource requires students to compute variable overhead spending and efficiency variances, as well as fixed overhead spending and production volume variances. In addition, students are required to provide a memo to management explaining the meaning of the variances they compute. It is our experience that students are typically capable of computing variable and fixed overhead variances, but have a much harder time attempting to explain these variances. In today's business environment, management relies on accountants not only for their ability to accumulate and present information, but also on their ability to explain and interpret the information. This resource provides an opportunity for students to practice presenting information to management, which is a key professional skill. In addition, we believe that presenting all three cost-system alternatives in the same scenario can help students further their understanding of fixed and variable overhead variance analysis.

The next section discusses the purpose and content of the resource, the learning objectives, various approaches to assigning this resource to students, and grading of student responses. The subsequent section discusses the students' evaluation of the resource, while the last section provides concluding remarks. The Appendix contains the actual resource materials that can be distributed to students. These materials include background information for Modern Watch Company, descriptions of the cost-system alternatives, quarterly and annual income statements for each cost-system alternative, predetermined overhead rate information, calculations for normal and standard costing, and a listing of requirements for students.

2. The Modern Watch Company

2.1. Purpose of the instructional resource

The present resource provides an integrative approach to cost-system design. In most cost accounting textbooks, actual costing, normal costing, and standard costing are presented in different contexts and chapters.[2] Although some instructors may present differences across these costing alternatives, there is no real opportunity in textbooks to compare the three costing approaches using a common data set. Therefore, this resource provides a unique opportunity to compare costing approaches applied to a common data set, which should increase students' understanding of the differences among the three costing systems.

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1 Some articles relate to overhead costs and overhead allocation. For instance, Snead, Stott, and Garcia (2010) analyze the causes of misapplied capacity-related manufacturing costs, and Durden and Mak (1999) provide an argument that if the purpose of a costing system is cost management, rather than external reporting, then overhead variances should be reported as period costs. Other cases and articles present in-depth variance analysis, for instance Mudde and Sopariwala (2008). However, in our search, we found no articles in the *Journal of Accounting Education*, *Issues of Accounting Education*, or, to the best of our knowledge, in any other journals that provide comparisons between traditional cost allocation alternatives or that focus on variance analysis calculations *and* reporting to management. We hope to fill this void in the literature with this teaching and educational note.

2 Based on our review of the contents of 13 popular cost accounting books, actual costing is typically covered in the beginning of a cost accounting course before overhead is introduced. Normal costing is typically introduced with job order costing and allocation of overhead using a normal costing system. Standard costing is typically introduced after flexible budgets and generally includes variance analysis.