



# **Training and Resource Manual**

**Instructional Design Project Management  
MIT 520 Fall 2004  
Project Report**

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## I. Executive Summary

K.E. Austin Corporation, GoGas has been experiencing a high number of station manager and cashier computer related errors since implementing a new computer-based point of sale system, in all nineteen locations within southeastern North Carolina, during the past year. The employees who work at each of these stations are consistently unable to troubleshoot and fix basic computer hardware and software problems without assistance.

Consequently, this increases the time that the technology support personnel must spend either on the phone or driving to the stations in order to fix simple problems. A Needs Assessment was conducted by the management team who determined this to be a training related issue. The solution that was decided upon was to implement a print-based self-instructional training program with job aids, which could be utilized within each of the nineteen stations by all of the station managers and cashiers. Each station will receive one instructional package with enough supplies for each employee to undergo the self-instructional training program.

The client specified that this program must include instructional materials and job aids pertaining to troubleshooting basic computer hardware and software problems that may arise during everyday work. These materials will be produced in-house at corporate headquarters and will consist of full color pages bound in three ring binders that can be easily augmented with future resources for each station. The materials will be completed and ready for distribution to all nineteen stations by January 5, 2005.

## II. Scope Management

### Conceptual Development

**Problem Statement:** K.E. Austin Corporation, GoGas LLC has been troubled by the number of cashier and station manager computer related errors in their gas stations since the introduction of a new point of sale (POS) system, Gasboy, which was implemented without adequate training. In addition to the implementation of the Gasboy, which is computer based, the employees are also required to be familiar with the basic components of a computer without any prior exposure within the workplace. The old system that was replaced by the new Gasboy was an analog based control panel that did not require computer knowledge. The inability of these employee to troubleshoot and fix these problems without assistance has had a significant effect on their overall work performance. Additionally there has been extra time spent by the technology support personnel to fix these problems, which detracts from time needed for other projects.

**Current Situation:** Station managers and cashiers are making several computer-related errors per day and do not possess to necessary skills to

troubleshoot and fix the problems themselves. Instead, these employees call the tech support person who must spend from 1-5 hours per day on the phone coaching these employees on how to fix the problems.

**Desired Situation:** Employees are able to troubleshoot and fix computer related problems without the aid of the tech support person.

### **Scope Statement**

**Project Objectives:** The first goal of this project is to conduct a learner, environment and context analysis to determine any factors that may be contributing to employee errors and inefficiency. A report will be produced based on the results of these analyses, in addition to the results of the needs assessment. It will include information derived from interviews, observations of training and performance facilities, a survey of all employees, conclusions and recommendations. The second goal is to implement a print-based training program with job aids, based on the results of the assessment, which includes basic computer hardware and software components, the Gasboy system and troubleshooting techniques by January 5, 2005.

**Alternative Analysis:** As an alternative to implementing a stand-alone print-based self-instructional training module there are several options:

- 1) Incorporate individual and group training sessions with the self-instructional module.
- 2) Offer off-hours training and instructional courses with emphasis on computers and technology.
- 3) Require prospective employees to have at least a minimum of computer-related skills before being hired.

These alternative solutions should be considered in the future to compliment the product that will be developed within the scope of this project. The client has required that the current scope be limited to the development of a print-based self-instructional module and the alternatives stated above are given as recommendations for the future.

**Product Specifications/blueprint:** Twenty-five training manuals with plastic protected 8.5 x 11 inch pages, packaged in 1 inch 3-ring binders with full color illustrations and descriptions of computer hardware and software screen shots. The components that will be included are monitor, keyboard, printer, mouse, CPU/tower, Windows NT desktop, and Gasboy screens including the CFN 3, Wayne pump session, Wayne CAT session and Profit Point . The manuals will also include self-instructional material and job aids to facilitate learning and troubleshooting, and will be produced in-house at the corporate headquarters.

**Constraints:** The deadline that has been set for this project is January 5, 2005, which is an external constraint, set by the management team at K.E. Austin Corporation. The cost associated with this project will be minimal due to the project being conducted primarily in-house where there is presently a stocked supply of all necessary materials. There is presently no budget constraints set by the management team, although all unforeseen costs must be approved by a member of the team. The format of this instructional material, a print-based training manual, is an additional constraint set by the client.

**Resource Estimates:** The resources that will be needed to complete the training program include all printing supplies, which are stored within the supply room at the administrative office. The subject matter expert that will be providing assistance with this project is the Network Administrator for GOGAS. This employee is salaried and has been instructed to work on this project as much as his time allows, which is estimated to be 5 hours per week.

<u>Resource</u>	<u>Estimated Cost</u>
Paper: 1 box (2000 sheets per box)	\$60.00
Color print cartridges (1)	\$200.00
1 inch 3 ring binders (25)	\$50.00
Plastic sheeting	\$125.00
Human (Jocat Conner)	\$15/hrX60 hrs= \$900.00
<b>Total Estimated Cost</b>	<b>\$1335.00</b>

**Development Team:** The development team that has been assembled for this project includes:

- 1) Jocat Conner, the Network Administrator and graphical designer for GOGAS, who will be assisting to ensure the content accuracy of the instructional material as the subject matter expert, and will also be assisting the instructional designer in the graphical layout of the manual and offering support.
- 2) Melissa Ennis, the instructional designer, who will be conducting the learner, environment and context analyses, evaluations, designing the instructional material using empirically validated design theory and strategies, as well as designing the graphical layout of the manual.

**Information Gathering Procedures:** The needs assessment, learner, environment and context analyses were conducted via semi-structured interviews with station managers, cashiers and tech support personnel; observations of working environment within each station, training facilities and

employee performance; and a survey that was distributed to all station managers and cashiers.

### III. Risk Management

**Potential Risks:**

- The constraint of producing the manual in-house poses a risk to the efficiency of both printing the pages and binding them. This operation is to take place during a regular work day within the main office that frequently uses the printing facilities throughout the day.
- The requirement of gaining approval from a member of the management team before continuing with the project, poses a risk to the timeliness of phase completion. Members of the management team are frequently unavailable to give direct verbal and written authorization.
- The lack of a budget poses a risk because of unforeseen costs associated with formatting, printing and binding the manual.
- The skills of the learners including reading and comprehension are also a concern because the management team has indicated that some learners have a below average level of reading skills.

Definition	Condition: Printing the materials in-house during a regular workday where employees are constantly using these facilities to conduct their day to day tasks.
	Consequence: The timeliness and efficiency of printing the pages and inserting them into the binders will be detrimentally affected.
Probability	80% probability of having printing issues. The cost of outsourcing the printing is estimated to be \$1000.00. Printing the manuals during the off-hours will not delay production or cost anymore in terms of human resources since the employee is salaried.
Responses	Strategies: Produce the manuals during the off-hours or outsource to Kinko's.

Definition	Condition: The management team requires verbal and written approval for every phase of the project before continuing to the next phase.
	Consequence: The timeliness of phase completion will be detrimentally affected because the members of the management team are frequently unavailable to give written and verbal authorization

Probability	30% probability of being delayed because of management team not being available to give approval.
Responses	<b>Strategies:</b> Have the management team give a member of their support staff who is consistently available the authority to approve each phase.

Definition	<b>Condition:</b> The management team is requiring the production to occur in-house with no budget because there is presently a stock room with all of the necessary supplies.
	<b>Consequence:</b> If the supplies run out and there is no one to procure more, then the production will be delayed.
Probability	10% probability of supplies running out. The time needed to procure more supplies is minimal and will not affect production time more than 1 hour.
Responses	<b>Strategies:</b> Ensure that there are adequate supplies before production is initiated and establish a protocol for prompt procurement of supplies if the need should arise.

Definition	<b>Condition:</b> The management team has indicated that some of their employees have a below average level of reading skills based on their pre-employment screening.
	<b>Consequence:</b> The learners will not be able to read and comprehend the training materials.
Probability	5% probability of employees not being able to read materials.
Responses	<b>Strategies:</b> Use clear illustrations and elementary language in the instructional materials and job aids.

#### **IV. Project Work**

##### ***Deliverables:***

- ✓ Needs assessment report that includes both quantitative and qualitative analyses, conclusions and recommendations.
- ✓ Instructional analysis report that includes learning goals, performance objectives and assessment instruments.
- ✓ Contextual analysis report of training facility and working conditions.
- ✓ Project report outlining goals, processes and evaluation summaries.
- ✓ Training program that incorporates a self-instructional manual/ resource guide and job aids.

**Work Breakdown Structure: (Milestones are denoted by ♦ )**

**1.0 Conduct Needs Assessment (already completed by client)**

**2.0 Conduct Instructional Analysis**

2.1 Meet with SME to identify:

- Learning goals
- Analyze performance of current work processes
- Performance GAP

2.2 Construct task analyses

**3.0 Conduct Learner Analysis**

3.1 Construct survey

3.1.1 Meet with SME to brainstorm ideas for questions

3.1.2 Format survey document and revise

**♦ Meet with instructional designer, SME and management team to review survey and obtain approval**

3.2 Distribute and collect survey responses

3.2.1 Fax survey to all 19 stations

3.2.2 Receive survey

3.2.3 Enter data into an Excel table

3.3 Import data table into SPSS

3.3.1 Run descriptive analysis

3.3.2 Print output and graphs

3.4 Prepare analysis report that includes:

3.4.1 Methods of analysis

3.4.2 Results

3.4.3 Conclusions/interpretations of data

**4.0 Conduct Context Analysis of Learning/Working Environments**

4.1 Visit training facility

4.1.1 Check for adequacy of tools and facility

4.2 Observe cashiers and managers in stations

4.3 Conduct semi-structured interviews of cashiers and managers

4.4 Prepare contextual analysis report of findings

**♦ Meet with instructional designer and SME to determine instructional strategies**

**5.0 Structure and Organize Instructional Content/Strategies**

5.1 Formulate instructional materials

5.2 Design performance objectives

**♦ Meet with instructional designer and SME to review instructional strategy, design and performance objectives**

## **6.0 Organize Layout of Instructional Material**

- 6.1 Design illustrations and graphics
- 6.2 Format all written instructional material and graphics into print layout
- 6.3 Revise Instructional content and layout

◆ **Meet with management team to obtain approval of layout and design**

## **7.0 Produce Instructional Material**

- 7.1 Print pages
- 7.2 Punch holes into pages
- 7.3 Place into 3 ring binders

## **8.0 Distribution and Assessment**

- 8.1 Assemble sample learner group
- 8.2 Distribute instructional material
- 8.3 Facilitate a focus group with learners to obtain feedback about content and learning results
- 8.4 Process revisions based on learner group feedback
- 8.5 Distribute to all cashiers and managers

## **9.0 Summative Evaluation (completed 1, 3 and 6 months after distribution of materials by outside source)**

# **V. Network Plan and Schedule (Refer to Microsoft Project File)**