

## Concise and Effective Procedure Writing - The Scripted Flowchart Process™

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Documents and documentation techniques are hot topics these days. The ISO 9001 Standard brings this to the forefront with a section entitled “Documentation requirements.” Moreover, Manufacturing Resource Planning (MRP) and Statistical Process Control (SPC) systems have long stressed that good documentation is a key to sustaining successful processes. This article describes a user-friendly technique for developing documentation that truly describes actual work processes, and is easy for the average person to read and understand. Companies become more effective when their documentation is simpler, more concise and accessible.

Before getting started, I'd like you to think back to the last time you assembled a consumer product, maybe it was a bicycle or a dollhouse on Christmas Eve. How many of those products had instructions that were easy to understand? Most of us, if the truth were told, end up looking at the pictures and ignoring most of the text. That's because most instructions are cumbersome, difficult to understand, and not well organized. Recently, I was assembling children's furniture manufactured by an international company. I was surprised – and pleased – that the instructions consisted only of pictures. Because the product was well designed, a simple picture was all the instruction needed to assemble the desk correctly.

**Simplify Procedures** Procedures that are the most useful are usually also the simplest. They are written in plain English with a minimum of technical language, jargon and acronyms. Because of this need for simple procedures, a somewhat contrary view toward documentation is presented. The typical format with scopes, definitions, and the like is avoided. Instead a straightforward documentation technique called the Scripted Flowchart Process™ is proposed.

**The Flowchart** In defining the Scripted Flowchart Process™, there are several techniques used. The first technique is based on the simple idea that a picture is worth a thousand words. At its core is the flowchart, which has long been used to illustrate systems and processes. Traditional flowcharting, however, separates the flowchart from the descriptive text, often losing readers as they jump back and forth between flowchart to text.

Moreover, often the text still includes scope, definitions, and references that can confuse the reader.

**The Playscript Process** After the flowchart, the next technique used is playscript. It involves writing procedures like a script for a play. A two-column format is used. The left-hand column lists the name of the “actor,” or the person responsible for accomplishing the task. The right-hand column, which is the larger of the two, describes the task and lists necessary documents and any special instructions. Each actor listed in the left-hand column has a task listed in the right-hand column.

**Linking the Techniques** A few years ago, during an ISO 9001 implementation project, I found that by linking a flowchart illustrating the process to a playscript describing each task, fewer words were needed to describe the process. Each task of the flowchart was numbered and a corresponding number added to the playscript. By doing this, it became quite clear who was responsible for each task. Furthermore, the playscript provided a convenient place to list additional details; for example, required forms, the keystrokes for a computer system, and so forth.

**Information Gathering** More important than the documents themselves, however, is the technique used to gather information about the work process being documented. Typically this is done by one or two people, often mid-level managers and technical writers, who sit in an office and generate the documentation by conducting individual interviews of the people involved in the work process. Conversely, with this new approach, the group that best understands the work process is brought together from the beginning. The group, consisting usually of five to nine people, first develops a flowchart of the entire process. Once the flowchart is accurate, a playscript is written describing each task and the person responsible for accomplishing the task. Emphasis is placed on the flowchart accuracy, depicting what is actually occurring, not what might be desired.

**Recording the Process** When creating the flowchart, start off by asking, “What is the very first thing that happens?” Then draw it on a white board. A white board is a great tool to use and works well for this because it allows you to easily change the flowchart as you fine-tune your understanding of the work process. It is helpful for the group to collect copies of all paperwork used in the process. These forms, tags, etc. are then fit into the flowchart/playscript. The actual paperwork can also be taped to the white board at the appropriate steps to help visualize the process. After the first step is complete, the second

step is discussed and added to the flowchart, and the next step, and so on. The flowchart is refined and revised until, very quickly, sometimes in less than an hour; there is an accurate flowchart of the work process. Once the work process has been identified in a very visual manner like this, it is easier for people to determine areas where improvement and streamlining could occur.

**Flowchart Methodology** A couple of comments about my use of flowcharts are in order. I really don't adhere to traditional flowcharting conventions. Only two shapes are used, one to represent tasks, the other to represent decisions. For tasks I chose the rectangle, though you can use any shape as long as you remain consistent. Decisions are represented with a diamond as they are in traditional flowcharting. By keeping it simple, I found that most people could easily understand the flowchart even if they were unfamiliar with formal flowcharting techniques. See the flowchart example in Figure One.

**Writing the Playscript** Once the flowchart reflects accurately the work process being documented, then the playscript writing is begun. This is done by filling in the two columns. Start by going to the first block on the flowchart and saying, "Okay, whose responsibility is this?", then write in the person's name or, ideally, a specific job title. Then, working as a group, answer several other questions, for instance: "What are the key details?" "What forms do they fill out?" "What keystrokes do they use?" When describing each task in the playscript, include only the appropriate level of detail, always striving to keep it brief. Proceed to the second block, which is the next task, and on to the next, until every task in the flowchart has a corresponding description in the playscript. Very quickly you have an accurate script with a brief, yet detailed description of each of the tasks on the flowchart.

When the flowchart and playscript are completely filled-in, you edit, constantly comparing the flowchart to the playscript and vice versa, to make sure that you've correctly described the entire work process. By continually comparing the playscript and the flowchart, you are better able to fine-tune both, eliminating redundancies, simplifying and clarifying when necessary.

**Keep It Simple** You'll notice in the example shown in Figure One that the language is kept simple with few acronyms and a minimum of jargon. Early in my career I was humbled by an engineer who took an elaborate problem-solving sheet that I had written and conducted a "Fog Index" test to assess its readability. I had written it at about a 17th grade

level, and it was very difficult for people to read and understand. Today, I work to keep it simple and readable using everyday language.

**Documentation and Quality Records** An additional section can be added to the scripted flowchart that works particularly well for companies documenting ISO 9001 compliance. This Documentation Summary has Documentation and Quality Records sections, and lists all the required documents for each task, as well as who is responsible for maintaining them, where the documents are kept, and their retention times. These documents and records are identified in the task section of the playscript in boldface or underlined. I found by using this technique for ISO 9001 and other quality system projects, the complete procedure including work instructions for an ISO element is usually under 10 pages, and sometimes as few as three or four pages. Obviously, this makes it a lot easier for people to use. They can now pick up the document and go right to the flowchart or playscript to determine what information is needed.

## Conclusion

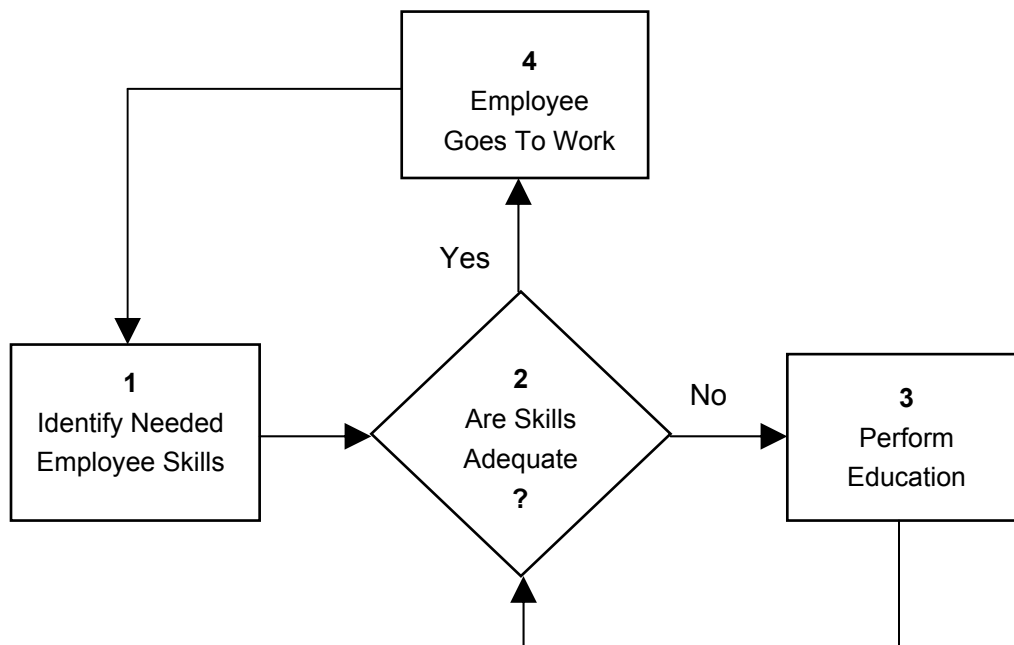
The demands placed on companies for “better, faster, cheaper” goods and services mandate that effective quality systems be developed, followed and constantly refined. Clear and concise quality system documentation is required to maintain and improve processes. This scripted flowchart technique addresses these issues by providing a method for writing instructions that people can really use to better understand and improve work processes. Involve the most knowledgeable workers in the information-gathering process, keep flowcharts simple, streamline and simplify processes where possible and write playscripts in everyday, easy-to-understand language. Your quality system will benefit because user-friendly instructions are available for employees’ reference and guidance.

## Bibliography

Matthies, Leslie, The New Playscript Procedure Management Tool for Action, Office Publications, Inc., Stamford, Connecticut 1977.

## Figure One - An example of the Scripted Flowchart Process™:

For the following flowchart and accompanying text, the text is keyed to the numbered boxes in the flowchart. Forms / records are in bold and underlined in the task section.



Responsibility	Task
1. Manager/Supervisor	Identify skills needed by the employee for his/her job function. Complete a <b><u>Job Profile Matrix</u></b> .
2. Manager/Supervisor	Complete an <b><u>Employee Skills Assessment Record</u></b> as required and determine if skills are adequate.
3. Manager/Supervisor	Complete identified skills training and record results on the <b><u>Employee Skills Assessment Record</u></b> and/or a <b><u>Training Attendance</u></b> form and forward records to Human Resources.
4. Employee	Performs his/her job function with a skills assessment at least once per year.