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**EDCI 572** 

**Design Document** 

# **Learning to Use a Serger**

#### Overview

This instructor-led workshop will teach learners how to thread a serger machine and make a pillowcase with it. A serger is a specific kind of sewing machine that was created primarily to sew knit fabric and has four interlocking threads instead of just one thread. The objective is for the learners to be able to use the serger machine on their own for basic projects without assistance by the end of the learning module. The workshop will focus on how to thread all four threads on the machine, sew a basic project together, and finish a serged edge.

A serger benefits the home sewer by increasing efficiency while making a project. Learning how to use a serger can save the sewer time and produce higher quality projects than a standard sewing machine. Many sewers have a serger but do not know how to use it, so it sits in a closet instead of being utilized. This workshop meets that need. By teaching the home sewer how to use the serger they can then increase project output and quality. Sewing is an important skill; it can be useful and develop both calculation skills and creativity. These skills could be used professionally. The participants could make clothing, quilts, or other goods to sell.

In addition to learning how to thread the machine, we will go over basic terminology and parts of the machine. We will discuss essential tools necessary for project completion. This workshop will focus on 5 steps leading to threading the machine and making a pillowcase. This workshop assumes the entry skills of basic machine operation, the ability to judge necessary thread tension and stitch length, and pre-cutting fabric to the specifications.

The participants in the pilot workshop are all k-12 teachers or retired teachers in their 60s. All have advanced sewing skills on a standard sewing machine. The pilot module will be live in one of the participant's homes. Future modules could be done live or potentially via video. Due to the technical nature and tiny parts, in-person is a better option for presenting this instruction. The module could be used by individual sewing teachers or by a sewing shop giving classes.

#### **Approach**

In this approach, I am the Subject Matter Expert. The problem that was originally voiced is that the learners have owned a serger machine for over 20 years but do not know how to use it. The main issue is that they do not know how to thread it. Although my learners are more advanced seamstresses than myself on a standard sewing machine, they have no experience using a serger. I have taken lessons and used a serger for four years.

Sewing is a psychomotor skill; it is both a physical and mental activity (Dick & Carey, 2015, pg. 44). Although we are focusing on threading the machine, there are other mental calculations that must be made when setting up a sewing machine. The women I am teaching already have the necessary skills to adjust the thread tensions and decide a stitch length. These are transferable skills from a standard sewing machine.

# Identification of instructional goal

Desired Status	-	Actual Status	=	Need
Learners will be able to thread and create a basic project on a serger/overlocker machine.		Learners are proficient using a standard sewing machine but have no experience with a serger/overlocker.		Learners need a workshop introduction to threading a serger/overlocker machine and making a pillowcase using the machine.

Instructional Goal: By the end of this workshop, a home sewer will be able to use a serger machine and basic sewing supplies to thread a serger and make a pillowcase.

The participants have been sent a list of supplies. The list is included in appendix A. The list explains what will be provided for them at the workshop as well as what they need to bring themselves.

# **Goal Analysis Diagram**

The learners: Home sewers

What Learners will be able to do in the performance context: Thread the serger machine and make a pillowcase.

The performance context in which the skills will be applied: Home sewing.

The tools that will be available to the learners in the performance context: Serger machine and basic sewing supplies. (Thread, scissors, needles, etc. Students have been provided a list of supplies prior to the workshop).

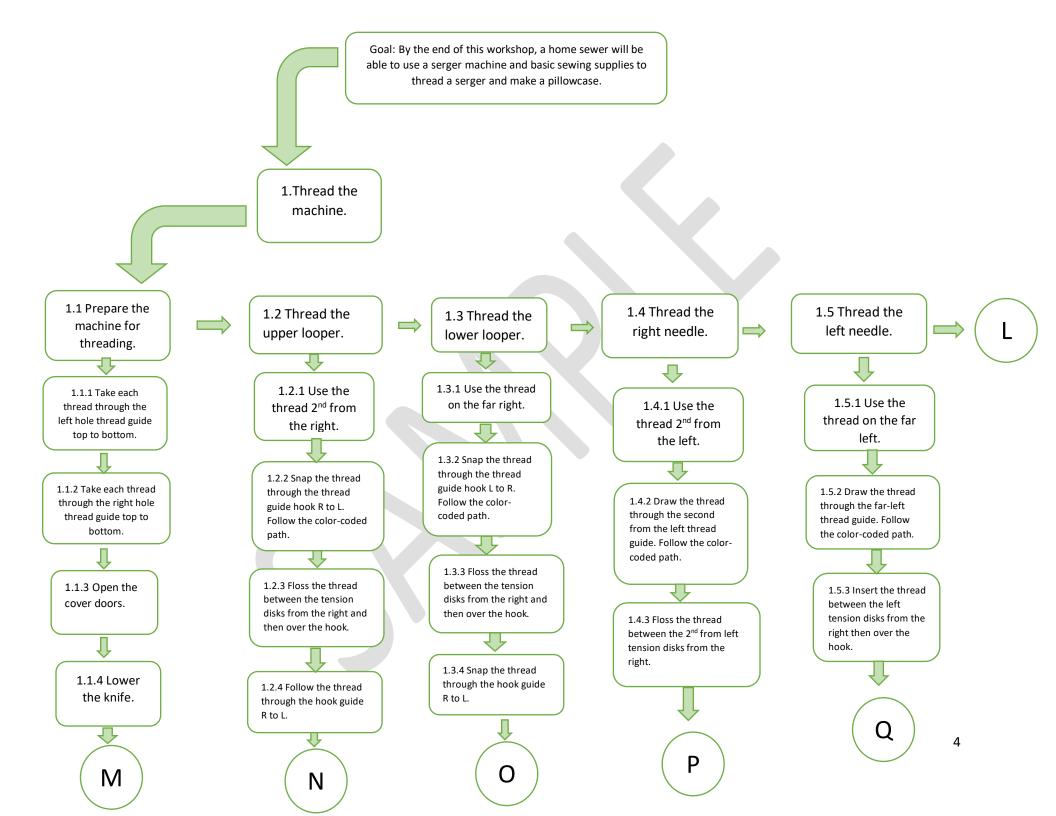
The Goal Analysis Diagram is a separate attachment. The diagram includes the instructional goal, main steps, and subordinate steps. There are also prerequisite, or entry skills shown below the dotted line. As this is a psychomotor goal, each step is described specifically and in detail. The entry skills set a baseline of knowledge and action needed prior to the start of the workshop.

#### Reflection

Two women have been asking me to teach them to use their sergers for a couple of years. This project gave me the perfect platform to provide them with a cohesive lesson. Scheduling the workshop has been a challenge. My participants are on teacher's schedules and getting them together around the beginning of the school year is difficult. Deciding which were main goals and which were subordinate skills was also difficult. Additionally, deciding how much information was too much information was difficult. Since this is a Psychomotor skill, very detailed actions are involved in each step. However, I am really enjoying this process as I get to dig into the details of a skill about which I am already passionate. Finding the step-by-step information for each skill was not difficult but filtering it to what is important has been difficult.

The peer feedback process benefited me in many ways. My classmate's suggestion for rewording my main goal made my goal flow more smoothly. I also learned that I needed to simplify some steps. I combined several steps into one overarching goal and made more concise main steps. I implemented all the peer feedback given. Each suggestion made my topic clearer.

Learning to apply the Dick and Carey model has caused me to learn more about the topic as well. I could have taught the lesson with little preparation but going through each detailed step has caused me to understand the material better. Because the skills are so finite and technical, finding the steps toward the goal was very logical. This process had forced me to learn to explain something that I "just do" and be able to explain vs. just show.





1.1.5 Push the knob in.



1.1.6 Rotate the knob forward.



1.1.7 Raise the presser foot.





1.2.5 Snap the thread in the hook guide bottom to top. Continue to follow the color-coded thread guide path.



1.2.6 Pull the thread behind the pin.



1.2.7 Pull the thread through the upper looper.



1.2.8 Push the thread back and to the right.





1.3.5 Follow the thread through the next two thread guides R to L. Follow the color-coded path.



1.3.6 Follow the thread through the stationary thread guide under the knife and hardware.



1.3.7 Turn the handwheel forward until lower looper arm swings out.



1.3.8 Thread through the thread guide on the lower looper arm from L to R.



1.3.9 Rotate the handwheel forward until seeing the lower looper.



1.3.10 Make an X with the lower and upper



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looper, thread ABOVE

1.3.11 Pull the thread through the lower looper.



1.3.12 Put the knife back up & close the covers.





1.4.4 place the thread under the hook R to L.



1.4.5 Put the thread through the thread take-up lever R to L.



1.4.6 Snap the thread through the hook guide L to R.



1.4.7 Put the needle in its highest position.



1.4.8 Slide though the hook above the needle.



1.4.9 Thread the right needle.



1.5.4 Put the needle in its highest position.



1.5.5 Put the thread through the thread take-up lever R to L.



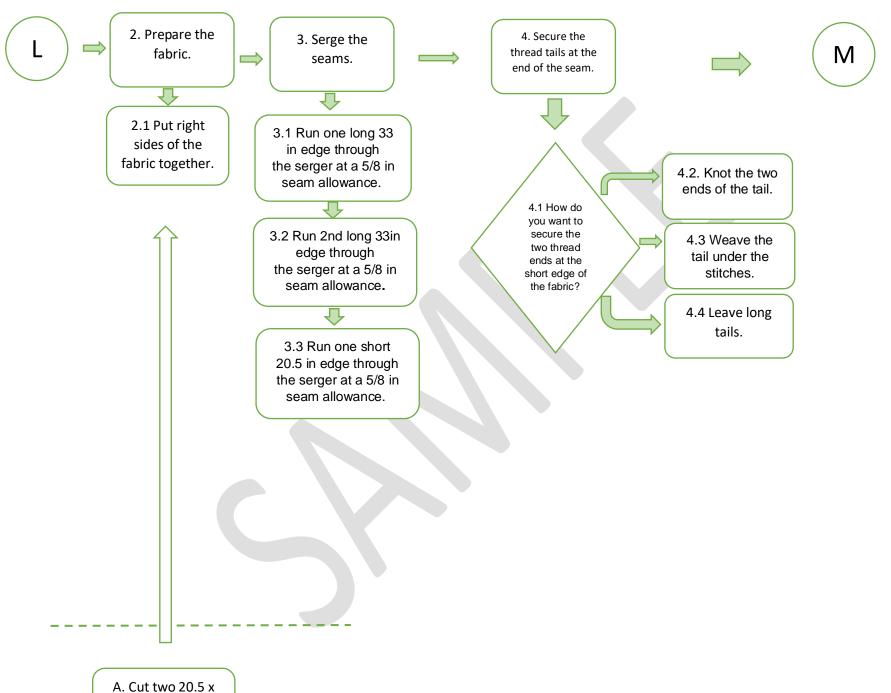
1.5.6 Put the thread through the hook thread guide from right to left.

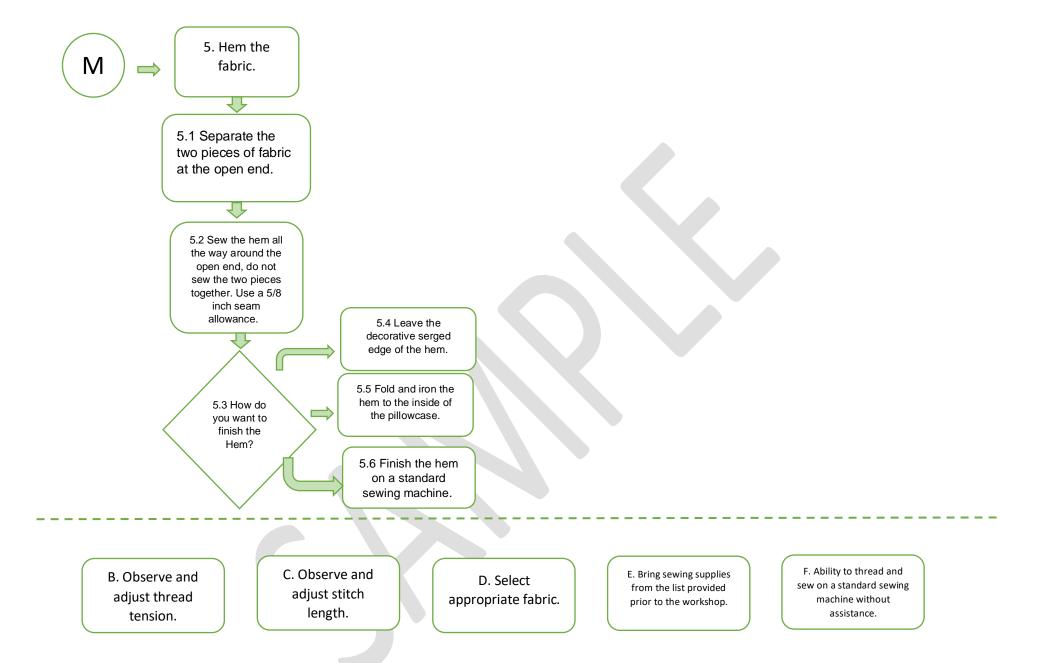


1.5.7 Slide through the hook above the needle.



1.5.8 Thread the left needle.





### **Learner Analysis**

The target population for this workshop are sewers who can independently operate a standard sewing machine but have no experience using a serger. It is preferred that the sewer owns their own machine but not required if there is access to a machine. The learners could be from many walks of life. According to a 2018 Forbes article, Association for Creative Industries CEO Mark Hill states, "The largest percentage of crafters (41%) are millennials, between the ages of 18-and-34 years old. Some 36% are 35-to-54 and 23% are 55 and older (Danziger, 2018)." My data comes from observation and surveys or interviews with my pilot learners. The learners are creative and practical people and the majority of them are women. Since the workshop is voluntary and for personal development, all learners will be ready to engage in the material. Other than being sewers, there could be great diversity in the backgrounds of the learners. Before the pilot workshop, when I communicated the supplies needed, I asked the learners some questions to verify that they have the entry skills necessary to successfully complete the workshop. Skill level can also be determined by examining participants' previous work.

## Learner Analysis

Information Categories	Data Sources	Learner Characteristics
Entry skills	Observations	The learners have a firm grasp of the
	Interviews	required entry skills. They know how
		to thread and sew on a standard sewing
		machine, observe and adjust thread
		tension, observe and adjust stitch length,
		select appropriate fabric, and cut the
		fabric.
Prior	Observations	The learners know what a serger looks like
knowledge of topic area	Interviews	but do not know how to thread or use
		it. They know how to make a pillowcase on
		a standard sewing machine, but not on
		a serger.
Attitudes toward	Observations	The learners feel positively towards an in-
potential delivery system	Interviews	person delivery system.
Motivation for instruction	Observations	The motivation is a personal motivation.
	Interviews	Learners are motivated by improving their
		skills and the ability to create new things.
Educational and ability levels	Observations	The formal education level of the student is
	Interviews	not relevant to our context. The ability
		level is important but can be determined by
		the entry skills.
General learning preferences	Observations	The pilot learners indicated that they enjoy
	Interviews	learning in person.

Attitudes toward training	Observations	The learner has voluntarily chosen to take
organization	Interviews	the workshop, so they have a positive view
		of the trainer.
General group characteristics	Observations	The majority of sewers are women, though
(Heterogeneity, size, and	Interviews	not exclusively. The learners could be any
overall impressions)		age, even children, as long as they have the
		required entry skills.

### **Performance Context**

The performance context will be in the learner's home. Some have a dedicated space for sewing but some must set a machine up on a table and take it down each time they want to use it. The goal is for the learners to be able to utilize the new skills at home in their sewing space. Before the workshop begins, I will verify that the student has the necessary supplies and resources at their home. The learner will have their own machine at home and written instructions to reference. Ideally the student is learning on their own machine so the equipment in the learning context and performance context are the same.

# Performance Context

Information Categories	Data Sources	Performance Site Characteristics
Managerial/supervisory support	Observations Interviews	Reward system-intrinsic, personal growth. Learners would be taking this workshop voluntarily and for pleasure. This skill is primarily for personal use so there is no manager.
Physical aspects of site	Observations	This class would be taught in a home or at a sewing school. The site for the pilot class is one of the learner's homes. We will be at the dining room table where each person can set up their machine. There are plenty of outlets for each machine. A sewing store/studio would have all the necessary equipment.
Social aspects of site	Observations	Each person is coming independently for personal growth reasons; there are not supervisors or administrators. Meeting in a home would be very comfortable for learners and a sewing store would be a neutral location. In the case of the pilot group, the participants all know each other, but in a class at a sewing store, the participants probably would not know each other.

Relevance of skills to workplace	Observations	This is not a primarily professional workshop. The skill would only be relevant to the workplace if the learner works in a sewing store or creates and sells sewn products for a living.
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# **Learning Context**

The learning context will be in a home or sewing store. It will be face to face. If in a home, the learning context may be the actual performance context. If in a sewing store the same supplies will be available. Ideally, the workshop is taught in the home using the same space and equipment that will be the performance context. The IDer has observed the location for the pilot workshop. There needs to be space for the learner to see what the instructor is doing physically while threading the machine. The learning context will likely be the same as performance context.

**Learning Context** 

Information Categories	Data Sources	Learning Site Characteristics
Number/Nature of sites	Observations Site visits	Number: There could be many different sites for the workshop. There is one location for the pilot workshop. Facilities/Equipment: If done in a home or sewing store there would be a table and outlets and basic sewing supplies. For the pilot workshop there is one large table with several outlets to accommodate several machines. Resources: The learners will be bringing the appropriate supplies. Constraints: If teaching in a home the instructor must verify that the student has all of the necessary supplies ahead of time.
Site compatibility with instructional needs	Observations Site visits	Instructional strategies/ Delivery approaches: A home or sewing store would accommodate the visual nature of the lesson.  Time: The lesson is one hour; we have scheduled three hours in the pilot space. Personnel: All that is needed is one instructor who would come to the location.
Site compatibility with	Observations	Location (distance): If the workshop is in
learner needs	Site visits	the learner's home, then it is very

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		convenient for the learner. If it is at a sewing store, the learner has probably chosen it because it is an accessible location. The pilot site is central to the learners and instructor. Conveniences: If in a sewing store there is access to several machines and many supplies. Space: Each person will have their own area to set up a machine and supplies and work. Equipment: The participants are bringing their own machines and required
Feasibility for simulating workplace	Observations Site visits	Supervisory: N/A Characteristics: The workspace, whether in a store or at a home, is very similar to the workspace participants have at home. Physical Characteristics: There is a table to support the machine, a chair to access the machine and outlets for the machine. Social Characteristics: In a class there may be more than one person however sewing at home is usually a solitary pursuit.

### **Assessment Plan**

There will be assessment touchpoints throughout the workshop. The assessments will allow me to see what the learner understands, and scaffold teaching based on those needs. The instructor will be able to observe the students' progress throughout the workshop.

#### Entry Skills Test and Pretest

Prior to the workshop each learner has received a list of needed supplies as well as a questionnaire verifying that they have the necessary skills to successfully complete the workshop. There should also be a phone call or discussion with the learner to verify that they have the necessary skills and tools. The learner will be asked to submit an example of previous sewn work. There will be an Entry Skills Test checklist for the instructor to review the article submitted by the learner. Given that the entry skills have been thoroughly vetted, there is no need for a pretest at the time of the workshop. We already know that the learners do not know how to thread a serger.

# **Practice Tests:**

The touchpoints are both observing the student doing specific skills and asking important questions. Errors can be corrected individually and adjusted in real time. The instructor will be

walking around and able to adjust on the machine or request re-threading at any time. We will review parts of the machine and the order of operations. We will talk about a few options we have at different points. The learner will only execute one option but needs to be familiar with the other skills that they did not choose to execute.

#### Post Test

The final assessment will be evaluating if the learners can successfully thread the machine by themselves. They will have the aide of written instructions. The instructor will go through a checklist to evaluate the terminal objective. The nature of the skill requires the skills to be mastered in order, therefore leading to natural evaluation along the way. There will be a checklist for evaluating the pillowcase. The instructor will use the checklist to verify that the learner has successfully completed the task.

Performance Objectives

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Instructional Goal	Terminal Objective
By the end of this workshop, a home sewer will be able to use a serger machine and basic sewing supplies to thread a serger and make a pillowcase.	Given a serger, supplies at home, and written instructions for reference, (CN) a sewer can demonstrate threading a serger (B) successfully within 3 attempts (CR). Given the sewer can thread the serger (CN) the sewer will create a pillowcase (B) by the end of the workshop (CR).
Main Step	Performance Objective
1. Thread the machine	Given thread, a machine, and written instructions for reference (CN), thread the machine following the color-coded thread path by bringing the thread through each color-coded guide (B) so that the machine sews a complete stitch successfully within 3 attempts (CR).
Subordinate Skill	Subordinate Objective
1.1 Prepare the machine for threading	Given thread, machine, and written instructions as reference (CN), take each thread through the top thread holes, open the cover doors, and lower the knife (B) so that the inside of the machine can be accessed successfully within 3 attempts (CR).
1.2 Thread the upper looper.	Given the top thread holes are threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and upper looper (B) successfully within 3 attempts (CR).

1.3 Thread the Lower Looper.	Given the upper looper is threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and lower looper (B) successfully within 3 attempts (CR).
1.4 Thread the right needle	Given the lower looper is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and right needle (B) successfully within 3 attempts (CR).
1.5 Thread the left needle	Given the right needle is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and left needle (B) successfully within 3 attempts (CR).
Main Step	Performance Objective
2. Prepare the fabric	Given the machine is threaded and the fabric is cut (CN) prepare the fabric (B) successfully in one attempt after being shown (CR).
Subordinate Skill	Subordinate Objective
2.1 Put right sides of the fabric together	Given the machine is threaded and the fabric is cut (CN) put the right (decorative) sides of the fabric together (B) successfully so that they are ready to sew in one attempt after being shown (CR).
Main Step	Performance Objective
3. Serge the seams.	Given the machine is threaded and the right sides of the fabric are together (CN) place the long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
Subordinate Skill	Subordinate Objective
3.1 Run one long 33 in edge through the serger at 5/8 in seam allowance.	Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
3.2 Run 2 <sup>nd</sup> long 33 in edge through the serger at a 5/8 in seam allowance.	Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are

	sewn together successfully in one attempt after being shown (CR).
3.3 Run one short 20.5 in edge through the serger at a 5/8 in seam allowance.	Given the second long 33 inch edge is sewn (CN), place the short 20.5 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
Main Step	Performance Objective
4. Secure the thread tails at the end of the seam.	Given all 3 seams have been sewn (CN) secure the thread tails at the end of the seam (B) so that the seam does not unravel successfully in one attempt after being shown (CR).
Subordinate Skill	Subordinate Objective
4.1 How do you want to secure the two thread	Given all 3 seams have been sewn (CN) choose how you want to secure the thread tails at the short edge of the fabric (B) so that the seam does not unravel successfully in one attempt after being shown (CR).
4.2 Knot the two ends of the tail	Given all 3 seams have been sewn (CN) knot the ends of the thread tail at each of the two ends (B) so that the seam does not unravel successfully in one attempt (CR).
4.3 Weave the tail under the stitches	Given all 3 seams have been sewn (CN) weave the tail under the stitches at each of the two ends (B) so that the seam does not unravel successfully in one attempt (CR).
	Given all 3 seams have been sewn (CN) leave a 5 inch thread tail at each of the two ends so that the seam does not unravel (B) successfully in one attempt (CR).
Main Step	Performance Objective
5. Hem the fabric	Given the thread tails have been secured (CN), hem the raw edge of the fabric (B) so that it does not unravel successfully in one attempt after being shown (CR).
Subordinate Skill	Subordinate Objective
5.1 Separate the two pieces of fabric at the open end	Given the thread tails have been secured (CN), separate the two pieces of fabric at the open raw end (B) so that it is one round continuous piece of fabric successfully in one attempt after being shown (CR).

5.2 Sew the hem all the way around the open end, do not sew the two pieces together. Use a 5/8 in seam allowance.	Given the two pieces of fabric at the open end are separated (CN), place the raw open end in the serger, under the presser foot, and sew the hem all the way around (B) completely, so that it does not unravel, in one attempt after being shown (CR).
5.3 How do you want to Finish the Hem?	Given the hem is sewn (CR), choose how you want to finish the hem (B) successfully, so that it does not unravel, in one attempt after being shown (CR).
5.4 Leave the decorative serged edge of the hem	Given the hem is sewn (CN) leave the decorative serged edge of the hem (B) so that it does not unravel successfully in one attempt (CR).
5.5 Fold and iron the hem to the inside of the pillowcase	Given the hem is sewn (CN) fold and iron the hem to the inside of the pillowcase (B) so that it does not unravel successfully in one attempt (CR).
5.6 Finish the nem on a standard sewing machine	Given the hem is sewn (CN) finish the hem on a standard sewing machine (B) so that it does not unravel successfully in one attempt (CR).

#### **Reflection DD2**

All the feedback that I have received has clarified what I am trying to say or do. I struggled with creativity while analyzing the assessment portion, but I came up with assessment activities and questions that fit the lesson. There were two suggestions regarding the assessment portion that I did not implement. They were good suggestions, however, I decided they did not apply well for the given skills. One was to tally the number of attempts toward the goal. I do not want to tally the attempts; I want the students to do it until successful. The machine will not work if they do not successfully follow the steps. The other suggestion was about partially correct answers. Again, the steps must be done accurately in a specific order for the machine to work, so there is no room for a partially correct answer. I did, however, incorporate a few questions with more than one answer.

I clarified some of the criteria and behaviors in my performance objectives after feedback pointed out that I had mixed the two a few times. It was also suggested that I add "successfully" or qualifiers instead of just stating actions, so I added that to my objectives as well. I am learning not only from the comments and feedback directed at my work. I am finding that the feedback given to my classmates is also helpful.

It has not been difficult to find a flow for the workshop as the skills must be done in a particular order. It was challenging to start writing objectives, but once I started, it was not difficult to

develop all the objectives. I am glad I picked a topic that I enjoy; it has made it much easier to write 20 pages about it!

# **Design Evaluation Chart**

Instructional Goal	Terminal Objective	Test Item
By the end of this workshop, a home sewer will be able to use a serger machine and basic sewing supplies to thread a serger and make a pillowcase.	Given a serger, supplies at home, and written instructions for reference, (CN) a sewer can demonstrate threading a serger (B) successfully within 3 attempts (CR). Given the sewer can thread the serger (CN) the sewer will create a pillowcase (B) by the end of the workshop (CR).	
Main Step	Performance Objective	Test Item
1. Thread the machine	Given thread, a machine, and written instructions for reference (CN), thread the machine following the color-coded thread path by bringing the thread through each color-coded guide (B) so that the machine sews a complete stitch successfully within 3 attempts (CR).	The student will be given written instructions. The instructor will observe the students using a checklist to verify they have accurately threaded the machine along the color-coded path. The student will complete 5 test stitches.
Subordinate Skill	Subordinate Objective	Test Item
1.1 Prepare the machine for threading	Given thread, machine, and written instructions as reference (CN), take each thread through the top thread holes, open the cover doors, and lower the knife (B) so that the inside of the machine can	The instructor will observe the students to verify, with the threading checklist, that they have accurately taken each thread through the thread holes, opened the cover doors and lowered the knife.

	be accessed successfully within 3 attempts (CR).	
1.2 Thread the upper looper.	Given the top thread holes are threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and upper looper (B) successfully within 3 attempts (CR).	In what order does the machine need to be threaded?  Upper looper  Lower looper  Right needle  Left needle
1.3 Thread the Lower Looper.	Given the upper looper is threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and lower looper (B) successfully within 3 attempts (CR).	What happens if you do not thread the lower looper ABOVE the upper looper?  The machine will not form a stitch. (Additionally, it could break the needle).
1.4 Thread the right needle	Given the lower looper is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and right needle (B) successfully within 3 attempts (CR).	The instructor will observe the students to verify they have accurately threaded the right needle along the color-coded path.
1.5 Thread the left needle	Given the right needle is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and left needle (B) successfully within 3 attempts (CR).	The instructor will observe the students to verify they have accurately threaded the left needle along the color-coded path.  The student will stitch a test stitch.
Main Step	Performance Objective	Test Item

2. Prepare the fabric	Given the machine is threaded and the fabric is cut (CN) prepare the fabric (B) successfully in one attempt after being shown (CR).	The instructor will observe the students to verify they have pre-cut the fabric as instructed.
Subordinate Skill	Subordinate Objective	Test Item
2.1 Put right sides of the fabric together	Given the machine is threaded and the fabric is cut (CN) put the right (decorative) sides of the fabric together (B) successfully so that they are ready to sew in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist.
Main Step	Performance Objective	Test Item
3. Serge the seams.	Given the machine is threaded and the right sides of the fabric are together (CN) place the long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify they have accurately serged the seams.
Subordinate Skill	Subordinate Objective	Test Item
3.1 Run one long 33 in edge through the serger at 5/8 in seam allowance.	Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify they have accurately serged the seams.
3.2 Run 2 <sup>nd</sup> long 33 in edge through the	Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in	The student will be given the pillowcase evaluation checklist. The instructor will observe the

serger at a 5/8 in seam allowance.	the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).	students to verify they have accurately serged the seams.
3.3 Run one short 20.5 in edge through the serger at a 5/8 in seam allowance.	Given the second long 33 inch edge is sewn (CN), place the short 20.5 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify they have accurately serged the seams.
Main Step	Performance Objective	Test Item
4. Secure the thread tails at the end of the seam.	Given all 3 seams have been sewn (CN) secure the thread tails at the end of the seam (B) so that the seam does not unravel successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify they have secured the thread tails successfully.
Subordinate Skill	Subordinate Objective	Test Item
4.1 How do you want to secure the two thread ends at the short edge of the fabric?	How you want to secure the thread tails at the short edge of the fabric (B) so that the seam does not unravel successfully in one attempt after being shown (CR).	What are the 3 possible ways to secure the thread tails?  Knot the two ends of the tail  Weave the tail under the stitches  Leave long tails
4.2 Knot the two ends of the tail	Given all 3 seams have been sewn (CN) knot the ends of the thread tail at each of the two ends (B) so that the seam does	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the tails have been successfully knotted.

	not unravel successfully in one attempt (CR).	
4.3 Weave the tail under the stitches	Given all 3 seams have been sewn (CN) weave the tail under the stitches at each of the two ends (B) so that the seam does not unravel successfully in one attempt (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the tails have been successfully woven under the stitches.
4.4 Leave long tails	Given all 3 seams have been sewn (CN) leave a 5 inch thread tail at each of the two ends so that the seam does not unravel (B) successfully in one attempt (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the tails have been left long enough to be secure.
Main Step	Performance Objective	Test Item
5. Hem the fabric	Given the thread tails have been secured (CN), hem the raw edge of the fabric (B) so that it does not unravel successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the raw edge has been hemmed successfully.
Subordinate Skill	Subordinate Objective	Test Item
5.1 Separate the two pieces of fabric at the open end	Given the thread tails have been secured (CN), separate the two pieces of fabric at the open raw end (B) so that it is one round continuous piece of fabric successfully in one attempt after being shown (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the two pieces of fabric are separated.
5.2 Sew the hem all the way around the open end, do not sew the two pieces together.	Given the two pieces of fabric at the open end are separated (CN), place the raw open end in the serger, under the presser foot, and sew the hem all the way around (B) completely, so	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the hem is sewn all the way around

Use a 5/8 in seam allowance.	that it does not unravel, in one attempt after being shown (CR).	
5.3 How do you want to finish the Hem?	Given the hem is sewn (CN), choose how you want to finish the hem (B) successfully, so that it does not unravel, in one attempt after being shown (CR).	What are the three potential ways to finish the hem?  Leave the decorative serged edge of the hem  Fold and iron the hem to the inside of the pillowcase  Finish the hem on a standard sewing machine.
5.4 Leave the decorative serged edge of the hem	Given the hem is sewn (CN) leave the decorative serged edge of the hem (B) so that it does not unravel successfully in one attempt (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the decorative serged edge has been left.
5.5 Fold and iron the hem to the inside of the pillowcase	Given the hem is sewn (CN) fold and iron the hem to the inside of the pillowcase (B) so that it does not unravel successfully in one attempt (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the pillowcase has been folded and ironed.
5.6 Finish the hem on a standard sewing machine.	Given the hem is sewn (CN) finish the hem on a standard sewing machine (B) so that it does not unravel successfully in one attempt (CR).	The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the pillowcase has been hemmed on a standard sewing machine.

Learning component	Design Plan
Cluster 1	Objectives:
Introduction and preparing the serger	<ul> <li>Entry skills</li> <li>Bring sewing supplies from the list provided prior to the workshop.</li> <li>Select appropriate fabric.</li> <li>Cut two 20.5 x 33 in rectangles of fabric.</li> <li>1.1 Given thread, machine, and written instructions as reference (CN), take</li> </ul>
	each thread through the top thread holes, open the cover doors, and lower the knife (B) so that the inside of the machine can be accessed successfully within 3 attempts (CR).
	1.1.1 Take each thread through the left hole thread guide top to bottom.
	1.1.2 Take each thread through the right hole thread guide top to bottom.
	1.1.3 Open the cover doors.
	1.1.4 Lower the knife.
	Content Presentation
	Content:
	<ul> <li>The instructor will go through the pre-workshop checklist to identify parts of the machine and transferable skills. The learner will be given the threading job aide in the Participant's Guide.</li> <li>The instructor will sew using the serger to show what we will be accomplishing. The instructor will explain that we are going to prepare the serger for sewing.</li> <li>The instructor will explain the connection between parts of the serger to parts of a standard machine and skills used on a serger to the corresponding skills on a standard machine.</li> <li>The instructor will demonstrate threading through the left and right thread hole guides for all 4 threads as well as opening the doors and lowering the knife.</li> </ul>
	Example:

Provide learning guidance - The instructor will allow students to individually thread the left and right thread hole guides on their own machine and will monitor progress and correct and help as needed.

# **Student Participation:**

- The instructor will ask: What parts of the machine do you recognize from a standard sewing machine? Learners discuss.
- The instructor will have students individually thread the left and right thread hole guides on their own machine, will monitor progress, and correct and help as needed.

**Practice Items and Activities:** Students will repeat threading the left and right thread hole guides three times until successful.

#### Assessment:

- The facilitator goes through the Pre-workshop Checklist with each student. The evaluator will check the first two items of the Threading Checklist with students and correct and encourage as needed.
- ASK: Identify the differential feed dial?

#### Student Grouping and Media Selection:

The student grouping will remain the same throughout the workshop. Students will observe the instructor perform each task in a small group of approximately 3 individuals. As this is primarily an individual endeavor, the skills will be practiced by the student alone. The only media used will be paper job aides in the form of a Participant's Guide for reference. This will be the same for each cluster moving forward.

# Cluster 2: Thread the upper looper

#### **Objectives:**

1. Given thread, a machine, and written instructions for reference (CN), thread the machine following the color-coded thread path by bringing the thread through each color-coded guide (B) so that the machine sews a complete stitch successfully within 3 attempts (CR).

- 1.2 Given the top thread holes are threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and upper looper (B) successfully within 3 attempts (CR).
- 1.2.1 Use the thread 2nd from the right.
- 1.2.2 Snap the thread through the thread guide hook R to L. Follow the color-coded path.
- 1.2.3 Floss the thread between the tension disks from the right and then over the hook.
- 1.2.4 Follow the thread through the hook guide R to L.
- 1.2.5 Snap the thread in the hook guide bottom to top. Continue to follow the color-coded thread guide path.
- 1.2.6 Pull the thread behind the pin.
- 1.2.7 Pull the thread through the upper looper.
- 1.2.8 Push the thread back and to the right.

#### Content:

- The instructor will explain that we are now going to thread the upper looper of the machine.
- The instructor will explain how threading a serger is similar and different from threading a standard sewing machine.

# Example:

The instructor will demonstrate threading the upper looper following objectives 1 through 1.2.8.

# **Student Participation**

#### **Practice Items and Activities:**

Following the job aide as reference, the instructor will have the learners thread the upper looper. The students will thread the upper looper 3 times until successful.

#### **Assessment:**

- The instructor will observe the students to verify they have accurately threaded the upper looper along the color-coded path.
- Ask: Which is the upper looper thread?
- Ask: In what order does the machine have to be threaded? Answer: 1.
   Upper looper 2. Lower looper 3. Right needle 4. Left needle

# Cluster 3: Thread the lower looper

# **Objectives:**

- 1.3 Given the upper looper is threaded, with written instructions as a reference (CN), follow the color-coded path to thread the tension disk and lower looper (B) successfully within 3 attempts (CR).
- 1.3.1 Use the thread on the far right.
- 1.3.2 Snap the thread through the thread guide hook L to R. Follow the color-coded path.
- 1.3.3 Floss the thread between the tension disks from the right and then over the hook.
- 1.3.4 Snap the thread through the hook guide R to L.
- 1.3.5 Follow the thread through the next two thread guides R to L. Follow the color-coded path.
- 1.3.6 Follow the thread through the stationary thread guide under the knife and hardware.
- 1.3.7 Turn the handwheel forward until lower looper arm swings out.
- 1.3.8 Thread through the thread guide on the lower looper arm from L to R.
- 1.3.9 Rotate the handwheel forward until seeing the lower looper.
- 1.3.10 Make an X with the lower and upper looper, thread ABOVE the upper looper.
- 1.3.11 Pull the thread through the lower looper.
- 1.3.12 Put the knife back up and close the covers.

#### Content:

- The instructor will explain that we are now going to thread the lower looper of the machine.
- Threading the lower looper is the most difficult part of threading the machine.

# Example:

The instructor will demonstrate threading the lower looper following objectives 1 through 1.3.12.

## **Student Participation**

#### **Practice Items and Activities:**

Following the job aide as reference, the instructor will have the learners thread the lower looper. The students will thread the lower looper 3 times until successful.

#### **Assessment:**

- The instructor will observe the students to verify they have accurately threaded the lower looper along the color-coded path.
- Ask: What happens if you do not thread the lower looper ABOVE the upper looper? Answer: The machine will not form a stitch. (Additionally, it could break the needle).

# Cluster 4: Thread the right needle

# **Objectives:**

- 1.4 Given the lower looper is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and right needle (B) successfully within 3 attempts (CR).
- 1.4.1 Use the thread 2nd from the left.
- 1.4.2 Draw the thread through the second from the left thread guide. Follow the color-coded path.

- 1.4.3 Floss the thread between the 2nd from left tension disks from the right.
- 1.4.4 Place the thread under the hook R to L.
- 1.4.5 Put the thread through the thread take-up lever R to L.
- 1.4.6 Snap the thread through the hook guide L to R.
- 1.4.7 Put the needle in its highest position.
- 1.4.8 Slide through the hook above the needle.
- 1.4.9 Thread the right needle.

#### Content:

- The instructor will explain that we are now going to thread the right needle.
- The instructor will talk through each step as they demonstrate.

# Example:

The instructor will demonstrate threading threading the needle following objectives 1 through 1.4.9.

# **Student Participation**

#### **Practice Items and Activities:**

Following the job aide as reference, the instructor will have the learners thread the lower right needle 3 times until successful.

**Assessment:** The instructor will observe the students to verify they have accurately threaded the right needle along the color-coded path.

# Cluster 5: Thread the left needle

# **Objectives:**

1.5 Given the right needle is threaded, with written instructions as reference (CN), follow the color-coded path to thread the tension disk and left needle (B) successfully within 3 attempts (CR).

- 1.5.1 Use the thread on the far left.
- 1.5.2 Draw the thread through the far-left thread guide. Follow the color-coded path
- 1.5.3 Insert the thread between the left tension disks from the right then over the hook.
- 1.5.4 Put the needle in its highest position.
- 1.5.5 Put the thread through the thread take-up lever R to L.
- 1.5.6 Put the thread through the hook thread guide from right to left.
- 1.5.7 Slide through the hook above the needle.
- 1.5.8 Thread the left needle.

#### Content:

- The instructor will explain that we are now going to thread the left needle
- The instructor will talk through each step as they demonstrate.

# Example:

The instructor will demonstrate threading the left needle following objectives 1 through 1.5.8.

# **Student Participation**

#### **Practice Items and Activities:**

Following the job aide as reference, the instructor will have the learners thread the lower right needle 3 times until successful.

**Assessment:** The instructor will observe the students to verify they have accurately threaded the left needle along the color-coded path.

# Cluster 6 Make the pillowcase

# **Objectives:**

- 2. Given the machine is threaded and the fabric is cut (CN) prepare the fabric (B) successfully in one attempt after being shown (CR).
- 2.1 Given the machine is threaded and the fabric is cut (CN) put the right (decorative) sides of the fabric together (B) successfully so that they are ready to sew in one attempt after being shown (CR).
- 3.1 Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
- 3.2 Given the first long 33 inch edge is sewn (CN) place the second long 33 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
- 3.3 Given the second long 33 inch edge is sewn (CN), place the short 20.5 inch edge in the serger under the presser foot and sew the seams (B) so that the two pieces of fabric are sewn together successfully in one attempt after being shown (CR).
- 4. Given all 3 seams have been sewn (CN) secure the thread tails at the end of the seam (B) so that the seam does not unravel successfully in one attempt after being shown (CR). 4.1 Choose how you want to secure the thread tails at the short edge of the fabric (B) successfully in one attempt after being shown (CR).
- 4.2. Given all 3 seams have been sewn (CN) knot the ends of the thread tail at each of the two ends (B) so that the seam does not unravel successfully in one attempt (CR).
- 4.3 Given all 3 seams have been sewn (CN) weave the tail under the stitches at each of the two ends (B) so that the seam does not unravel successfully in one attempt (CR).
- 4.4 Given all 3 seams have been sewn (CN) leave a 5 inch thread tail at each of the two ends so that the seam does not unravel (B) successfully in one attempt (CR).

#### **Content Presentation:**

**Content:** The instructor will demonstrate while talking through steps 2 through 4.4.

- The instructor will explain and demonstrate how to prepare the fabric and serge the seams.
- The instructor will demonstrate putting the right (decorative) sides of the fabric together.
- The instructor will direct students to be sure to leave long (3-5 inch) thread tails at the beginning and end of the seam.
- The instructor will explain that students should have three sewn sides
  of the pillowcase and the short edge should have two 3-5 inch thread
  tails at the beginning and end of the seam. Now we are going to
  secure the thread tails. There are three ways to secure the thread
  tails.

# **Student Participation**

#### **Practice Items and Activities:**

The instructor will have the learners prepare the fabric, serge the seams, and choose how to secure the thread tails.

#### Assessment:

- The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify they have secured the thread tails successfully.
- Ask: What are the 3 possible ways to secure the thread tails? Answer:
   1. Knot the two ends of the tail 2. Weave the tail under the stitches 3.
   Leave long tails

### Cluster 7

# **Objectives:**

# Hem the fabric

- 5. Given the thread tails have been secured (CN), hem the raw edge of the fabric (B) so that it does not unravel successfully in one attempt after being shown (CR).
- 5.1 Separate the two pieces of fabric at the open raw end (B) successfully in one attempt after being shown (CR).

- 5.2 Given the two pieces of fabric at the open end are separated (CN), place the raw open end in the serger, under the presser foot, and sew the hem all the way around (B) completely, so that it does not unravel, in one attempt after being shown (CR).
- 5.3 Given the hem is sewn (CR), choose how you want to finish the hem (B) successfully in one attempt after being shown (CR).
- 5.4 Given the hem is sewn (CN) leave the decorative serged edge of the hem (B) so that it does not unravel successfully in one attempt (CR).
- 5.5 Given the hem is sewn (CN) fold and iron the hem to the inside of the pillowcase (B) so that it does not unravel successfully in one attempt (CR).
- 5.6 Given the hem is sewn (CN) finish the hem on a standard sewing machine (B) so that it does not unravel successfully in one attempt (CR).

#### Content:

- The instructor will demonstrate while explaining objectives 5 through 5.6.
- The instructor will explain that there are three ways to finish the hem of the fabric. 1. Leave the decorative serged edge of the hem. 2. Fold and iron the hem to the inside of the pillowcase. 3. Finish the hem on a standard sewing machine.

#### **Student Participation**

# **Practice Items and Activities:**

The instructor will have the student choose one of three ways to finish them and have them do it.

#### **Assessment:**

- The student will be given the pillowcase evaluation checklist. The instructor will observe the students to verify the raw edge has been hemmed and finished successfully.
- Ask: What are the three potential ways to finish the hem? Answer: 1.
   Leave the decorative serged edge of the hem 2. Fold and iron the hem

	to the inside of the pillowcase 3. Finish the hem on a standard sewing machine.
Cluster 8 Evaluation	Objectives:
and wrap-up	Complete the evaluation
	Content Presentation:
	Content:
	The instructor will explain that the evaluation is at the back of the Participant's Guide and ask that it be completed.
	Student Participation
	<b>Practice Items and Activities:</b> The instructor will give students time to complete the evaluation.

# **Implementation Plan**

I will be giving a pilot lesson to a group of three sewers. The participants in the pilot workshop are all k-12 teachers or retired teachers in their 60s. All have advanced sewing skills on a standard sewing machine. The pilot module will be live in one of the participants' homes. They are all very talented sewers but have no experience with a serger. They are all teachers and will be very eager to give feedback about the lesson.

# **Evaluation Plan**

I will be giving an evaluation to the three participants. The evaluation is a written evaluation that is part of the Participant's Guide. I also gave my module to my sewing teacher to review for accuracy as a subject matter expert. She gave me written feedback on my Facilitator's Guide and User's Guide.

The questions I asked my participants are:

Were you given sufficient time to complete each task before the workshop moved forward?

Were the assessment opportunities throughout the workshop placed at the appropriate times?

Do you feel confident you could thread your serger on your own with the skills you learned today?

Are the instructions clear?

Do you feel that the workshop was well-paced?

#### **IDer Reflection**

I really enjoyed making the Participant and Facilitator Guides. That was when I felt like the project was ready to present. I was very proud of the design of the guides, and my learners seemed impressed too.

I asked my sewing teacher to review my materials before the workshop. She had a concern that my job aid would not apply if one of the learners had a different brand of machine from me. At the workshop, one learner did have a different machine. The task list was not identical to her machine's process, but it was close enough to meet the need.

A few of my peers had concerns about including my Goal Analysis Diagram as a job aide. I thought it was a straightforward way to break down the steps in a logical and clear way. My learners appreciated it and said it was easier to understand than the User's Manual that came with the machine.

I updated parts of my DD2 based on my professor's feedback. I added some criteria to my objectives to answer how the learner demonstrates the behavior correctly. I made a more formal Entry Skills test (attached) and addressed handling mistakes during the workshop.

One peer suggestion was to record the workshop so that participants had it as a reference. I tried to, but the memory on my phone was full. I did, however, include the information for the participants about the YouTube video that I referenced when writing my instruction so that they could watch it in the future.

Another peer suggested that I have an instructional manual with drawings. I did not make any changes to my module based on that suggestion because I felt I had already addressed it with the Participant's Guide. Additionally, a peer had some recommendations that would have applied to a standard sewing machine but do not apply to a serger.

### References

Danziger, P. N. (2018, July 8). *Millennials are ready for crafting, but is the \$36B crafting industry ready for them?* [article]. Forbes. https://www.forbes.com/sites/pamdanziger/2018/07/08/millennials-are-ready-forcrafting-but-is-the-36b-crafting-industry-ready-for-them/?sh=203e329e3a2c.

Dick, W., Carey, L., & Carey, J. (2015). The systematic design of instruction (8th ed.). Pearson.

Janome. (2007). Mylock204D: Instruction book model 204D. Tokyo, Japan: Author.

Pocono Sew and Vac. (Sept. 18<sup>th</sup>, 2016). *Simple serging 101: threading fundamentals* [Video].

YouTube. Simple Serging 101: Threading Fundamentals by Pocono Sew and Vac

# Appendix A

**Supplies For Serging** 

# **Supplies**

- Serger with power cord and peddle
- Appropriate size needles
- Thread Ideally 4 different colors for learning to thread.
- Fabric for pillowcases Cotton quilting fabric precut two 20.5 x 33 in rectangles of fabric. We will be using a 5/8 in seam allowance.
- Tweezers
- Floss threaders (provided)
- Extra fabric for practice (provided)
- Extra light for threading/flashlight (optional)
- Sewing Scissors
- Magic clips optional (No pins) (provided)
- Hand upholstery needle for finishing serged edges (provided)
- User's manual for the serger.
- Pen/Pencil
- Notepaper

# Appendix B Learner Pre-Survey

# Jo

Do you have these skills?

Ability to thread and sew on a standard sewing machine without assistance. Yes

Select appropriate fabric. Yes

Observe and adjust stitch length. Yes

Observe and adjust thread tension. Yes

What do you already know about sewing with a serger? That it finishes edges, is great for some knits and that I don't own one.

How do you prefer to learn?

In-person

Video

Reading

Hands on

# **Betsy**

Here are my responses to your questions:

Do you have these skills?

Ability to thread and sew on a standard sewing machine without assistance. Yes No Yes Select appropriate fabric. Yes No Yes

Observe and adjust stitch length. Yes No On a standard machine, Yes

Observe and adjust thread tension. Yes Not so hot on this one. I have but I am not great at it. So maybe no.

I learn best in person. Hands-on.

Motivation: I have a machine and don't know how to use it. I am hoping that it will help me particularly when sewing knits.

This is the instructional goal: By the end of this workshop, a home sewer will be able to use a serger machine and basic sewing supplies to thread a serger and make a pillowcase.

How relevant is this instructional goal to you? It's relevant. It will be good to know how to use the machine.

What aspects of the goal interest you the most? How to actually thread and use the machine.

How confident are you that you could learn to perform the goal successfully? I am fairly confident.

How satisfying would it be for you to be able to perform the goal? Hopefully, by the end, I will know how to use the machine, but I don't know that it will help me with knits.

I am a fairly accomplished seamstress, but I really know very little about using a serger.

# Diana

Here are the answer to your class questions. If you have any questions about my answers, please let me know.

Do you have these skills?

Ability to thread and sew on a standard sewing machine without assistance. Yes

Select appropriate fabric. Yes

Observe and adjust stitch length. Yes

Observe and adjust thread tension. Yes

\*What do you already know about sewing with a serger?

The serger sewing machine finishes the edges of the fabric as it sews the pieces of fabric together and cuts the fabric.

\*Prefer to learn

in-person

video (I have watched YouTube to learn directions while actually viewing

how the project is constructed)

small group

reading

\*What is your motivation for learning to sew on a serger?

The serger was gifted to me many years ago and due to a busy life I wasn't able to devote time and energy to learn how to use it. Now that I have the time, I would like to broaden my sewing skills.

\*How relevant is this instructional goal to you?

Being able to complete the pillowcase project gives me the skills and confidence to create and complete future projects.

\*What aspects of the goal interest you the most?

The goal is perfect as I have started designing and sewing holiday pillowcases for my grands.

\*How confident are you that you could learn to perform the goal successfully?

I will do my best to follow directions and learn the new skills provided and with practice become proficient with the use of the serger.

\*How satisfying would it be for your to be able to perform the goal?

I enjoy choosing projects, sewing and sharing completed items with others. It will be worthwhile to see the end result with a professional finish.

\*Educational level

Bachelor of Science degree in Home Economics from Ball State University

\*Sewing education

I learned how to sew during 4-H with very knowledgeable and dedicated leaders. I became a 10 year clothing member. I continued sewing through college with Home Ec. major, designed my wedding dress with a friend seamstress sewing it. For many years I didn't have the time to sew. And then came fun projects such as baby burp cloths, booboo bags, a Dr. Seuss quilt for our grandson Leo and covid masks for friends and family. More quilts to come!

# Appendix C



