

Becoming a Master Learner

“We now accept the fact that learning is a lifelong process of keeping abreast of change. And the most pressing task is to teach people how to learn.”

—Peter F. Drucker

REFLECTION

In this experience, you will use a **Learning Journal worksheet** to document (capture and present) and reflect upon discrete learning experiences, including your use of the Learning Process Methodology.



ON MY OWN

PURPOSE

Most people in our society have a very difficult time when it comes to constructing knowledge. The majority of us have been trained to see knowledge as information such as a phone number, address, or road sign. This informational-type knowledge can be written or memorized. This goal of this activity is to help you appreciate that there are higher levels of knowledge beyond informational (memorized) knowledge. These other levels include teachable knowledge where you know something so well that you can teach others how to comprehend, understand, and produce meaning with it. Additional value of knowledge is realized as it is contextualized (used in specific contexts), generalized (used in general outside of a single context) and finally transferred to important parts of your life (applied across different contexts). The next level of knowledge is where strong performers differentiate themselves from others because of their level of working expertise and problem solving abilities.

During the process of learning how to learn and becoming a master learner, it is important that you are able to build the metacognition of how you learn—that is, understand your learning as a process in itself over which you have control and about which you can think and talk. This experience will help you tap into the extensive educational research focused on how people learn and what practices can help improve learning. In pursuit of this goal, this experience offers you a model of the learning process called the Learning Process Methodology (LPM), the Levels of Learner Knowledge (which will help you measure your level of learning), and a Learning Journal tool to document learning. The Classification of Learning Skills, introduced in Experience 1, continues to be a critical resource that you should call upon as needed.

OBJECTIVES

1. Learn to differentiate levels of learning based on the Levels of Learner Knowledge.
2. Learn how to elevate learning to higher Levels of Learner Knowledge.
3. Make the connections between specific learning skills and the learning process.
4. Strengthen the use of prior knowledge in learning by strengthening the skill of generalizing.

DISCOVERY EXERCISE

What means do you currently use to produce new knowledge that you can either teach others to understand or to apply to effectively solve problems? Think about it this way:

- What are the things do you to prepare and organize yourself for learning?
- What do you do to produce understanding and meaning?
- How do you take your understanding and do something valuable with it?

When you've completed the reading, answer the Exploration Questions.

READINGS

How Do You Learn?

Sample Learning Journal worksheet (available from the resources website: www.pcrest.com/L2L)

RESOURCES

Learning Process Methodology, Levels of Learner Knowledge (contained in the reading)

Classification of Learning Skills (from Experience 1)

EXPLORATION QUESTIONS

1. Think about someone you know who learns things quickly. What are three things he or she does that helps him or her learn so quickly?
2. Think about someone you know who is “smart.” What is it that makes him or her smart?
3. What is the relationship between learning skills and being “smart”?
4. How can use of the Learning Process Methodology and focusing on improving your learning skills help you to become smarter?

AM I READY FOR CLASS?

I have reviewed the resources

I have answered the Exploration Questions

I have completed the readings, including the sample Learning Journal worksheet

How Do You Learn?

What does it mean to learn? Life is a process of learning, from learning how to ride a bike to learning how to drive a car and everything in between. We most often think about what we want to learn, rather than how to learn. Knowing more about learning, however, will make you a better learner. Being a better, more confident learner will not only help you succeed in college: it will help you be a life-long learner as well. Think about a skill you have learned. Maybe you were on the track team in high school, for example. You learned how and why your muscles needed to be stretched and how sleep and good nutrition helped you perform at your highest possible level. Think about how race car drivers understand how to take their driving skills to the highest level: the driver knows how to make his or her car perform at maximum capacity and how to use the curves on the track to his or her advantage.

What does it mean to know more about learning? First and foremost, it means knowing more about yourself as a learner. We'll take a close look at the most basic methodology for college students: the Learning Process Methodology.

Ken is what many call a “non-traditional learner”—someone who has not come directly to college from high school. Ken has been a successful plant manager, but his company is moving the plant to another state. Because Ken’s children are happy in their schools and his wife is happy in her job, the family has decided not to move. So Ken has decided to pursue a new career in the police department. As a lifelong resident of his hometown, Ken has always been interested in keeping the town safe and working with people in trouble. The police department now requires a college degree, so here he is!



Levels of Learning

In the 1950s, Benjamin Bloom was an educational psychologist who contributed many ideas about learning that are still used today. He developed what has become known as Bloom’s Taxonomy of Educational Objectives. A “taxonomy” is simply a form of classification and a way to look at the general principles of a system. If you are taking botany or zoology, for example, you are learning to classify plants or animals. These kinds of classification are also taxonomies. Many educators have used Bloom’s taxonomy to help them think through how to present knowledge to learners. In the taxonomy, Bloom identified a progression of learning through levels. In the following table, Bloom’s work has been revised by Process Education scholars to reflect levels of learner knowledge.

Levels of Learner Knowledge

<p>Level I</p> <p>Information</p> <p><i>“Memorization”</i></p>	<p>You can talk about a concept, process, tool, or context in words and can provide definitions or descriptions. You are best with questions about facts.</p>	
	<p><i>A learner at this level can answer these questions:</i></p>	<p><i>“Where is...?”</i></p> <p><i>“Can you list the three...?”</i></p>
<p>Level II</p> <p>Conceptual Understanding</p> <p><i>“Teaching”</i></p>	<p>You can construct an appropriate model in your mind pertaining to a particular item of knowledge. You also can link items of knowledge to each other.</p>	
	<p><i>A learner at this level can answer these questions:</i></p>	<p><i>“How would you compare or contrast...?”</i></p> <p><i>“What is the main idea of...?”</i></p>
<p>Level III</p> <p>Application</p> <p><i>“Transfer Knowledge to a New Situation”</i></p>	<p>You can apply and transfer a particular item of knowledge to different situations and contexts. You can generalize the knowledge to determine ways to apply it, testing boundaries and linkages to other information. You are able to teach this knowledge to others.</p>	
	<p><i>A learner at this level can answer these questions:</i></p>	<p><i>“What would result if...?”</i></p> <p><i>“How would you apply what you learned to develop...?”</i></p>
<p>Level IV</p> <p>Working Expertise</p> <p><i>“Problem Solvers”</i></p>	<p>You can solve complex problems by applying and generalizing multiple concepts, processes, and tools to produce a quality problem solution. You are seen as an expert in your field.</p>	
	<p><i>A learner at this level can answer these questions:</i></p>	<p><i>“Can you propose an alternative...?”</i></p> <p><i>“Can you construct a model that would change...?”</i></p>
<p>Level V</p> <p>Research</p> <p><i>“Creative Enterprise”</i></p>	<p>You have innovative expertise which can be used to develop new understanding. You often make new linkages among concepts and problem solutions, which have not been seen before.</p>	
	<p><i>A learner at this level can answer these questions:</i></p>	<p><i>“Can you formulate a theory for...?”</i></p> <p><i>“Can you think of an original way to...?”</i></p>

One of our goals for you in this course is to help you raise your learning by at least one level. What would this mean? For example, after this course, Ken will find himself able to move from Level 1 in algebra to Level 2 where he not only understands the facts but is also able to solve simple equations. At Level 3, he will be able to use algebra to solve real-world problems. As you can see from this example, one of the essential purposes of learning is to be able to transfer knowledge to new situations and problems. One important way you can do that is to organize the way you learn. This can be accomplished by applying the Learning Process Methodology.

Ken's Level of Learning

Ken sees himself on different levels depending on the subject matter. With algebra, he's really at the level of information. He's just getting used to the vocabulary of algebra and how to use it to solve simple problems. But in the area of management, he is working at Level 3. He is able to solve new problems at work at the plant based on what he has learned from prior experience.



The Learning Process Methodology

Let's look at the process of learning—a process used continually as a student and one you will use throughout your entire life. While learning is not a new process, it is one that is complex and not easily understood. As you increase your ability to learn, your self-esteem and confidence will grow, and you will become a person with broader horizons. You will also increase your opportunities for personal growth, leading to life experiences that become more rewarding and enjoyable.

The Learning Process Methodology (LPM) has components that cover three main stages of learning: 1) preparing to learn, 2) performing a learning activity, and 3) assessing and building new knowledge. Each stage can then be broken down further as shown below. The Learning Process Methodology can also be used as a resource to gain insights into the processes you currently use when learning. No matter your strengths or weaknesses when it comes to the learning process, your learning CAN be improved. The Learning Process Methodology is a reliable and useful tool to improve your ability to learn.

Overview of the Learning Process Methodology

Stage 1: Preparing to Learn

Set the stage for learning: A person will perform better at the beginning of the learning process if he or she feels that what is to be learned is important and worthwhile, sees how what is to be learned fits into a “big picture” or builds on what he or she already knows, and has the necessary prerequisite skills and knowledge to start the process.

Set goals and criteria for learning: By determining learning objectives, the learner clarifies the general purpose of the learning activity. Performance criteria provide specifics as to what is expected of the learner in terms of outcomes or performance.

Obtain relevant information for learning: This provides the learner with the terminology and background information necessary to begin the process of learning something new.

Stage 2: Performing a Learning Activity

Implement action for learning: The process of building new knowledge (learning something new) involves constructing and following a plan with a set of tasks which results in meeting the learning objectives and established performance criteria. The plan should include the use of information, models, and questions which require critical thought. Models and examples help the learner to explore and build understanding about what is being learned. Knowledge is constructed by thinking critically which involves asking and answering key questions.

Apply what you have learned: A measure of true understanding and learning is the presence or absence of a learner’s ability to transfer what has been learned to new contexts and apply knowledge in new and different ways to solve problems.

Stage 3: Assessing and Building New Knowledge

Assess the learning process: The learning process can be improved if a learner becomes proficient at self-assessing his or her performance while he or she is learning. By focusing on strengths and areas for improvement, a learner can use this information to improve his or her performance in the next learning situation.

Construct new knowledge: A learner becomes a “self-learner” when he or she continues the learning process to conduct research and construct new knowledge which builds upon prior knowledge. This includes applying knowledge in new contexts, creating new methodologies, and making new interpretations or understanding things in a new way.

The steps for the Learning Process Methodology (LPM) are presented below, followed by an example of how the LPM can be applied to situations that require learning. It is not critical that you memorize the LPM, but it is important that you become familiar enough with it that you can apply it to actual learning situations.

LEARNING PROCESS METHODOLOGY 

Step	Explanation
<i>Stage 1: Preparing to Learn</i>	
1 Why	Identify and explain your reasons for learning.
2 Orientation	Develop a systematic overview of what is to be learned.
3 Prerequisites	Identify necessary skills and background knowledge needed to perform the learning.
4 Learning Objectives	Set appropriate goals and objectives for the learning activity.
5 Performance Criteria	Determine specific desired outcomes used to measure and gauge performance.
6 Vocabulary	Identify and learn key terminology.
7 Information	Collect, read, and study appropriate resources.

Step	Explanation
<i>Stage 2: Performing a Learning Activity</i>	
8 Plan	Develop a plan of action to meet the performance criteria.
9 Models	Study and review examples that assist in meeting the learning objectives and performance criteria.
10 Thinking Critically	Pose and answer questions that stimulate thought and promote understanding.
11 Transfer/Application	Transfer knowledge to different contexts; apply knowledge in new situations.
12 Problem Solving	Use knowledge in problem solving situations.
<i>Stage 3: Assessing and Building New Knowledge</i>	
13 Self-assessment	Assess use of the learning process and mastery of the material learned.
14 Research	Create and develop knowledge that is new and unique.

Now that you've seen an overview of the Learning Process Methodology as well as a description of its steps, let's apply the LPM to a possible real life scenario.

The Learning Process Methodology: A Simple Example

Scenario: You received a digital watch for your birthday. It's a great watch with all kinds of advanced functions. But it's currently showing the date as December 12, 2012, and the time as 12:12 p.m. Obviously, you're going to need to set the watch to the correct date and time...this is an ideal learning activity and a perfect time to test drive the LPM!



Step	Explanation
1 Why	You want to start wearing and using your new digital watch.
2 Orientation	Look over the contents of the package, the watch, and printed materials.
3 Prerequisites	Include reading skills, ability to tell time, and fine motor skills.
4 Learning Objectives	You want to learn how to set the watch to the correct time and date.
5 Performance Criteria	Set the watch to the correct time and date within five minutes.
6 Vocabulary	Terms to know: LCD screen, functions
7 Information	The operating instructions booklet

Step	Explanation
8 Plan	Read instructions for three minutes. Refer to the watch while reading instructions. Set the time and date according to the instructions and within two minutes.
9 Models	The diagram of the watch included with the instructions
10 Thinking Critically	Which buttons control which functions? What is the correct time and date? Does the watch need to be set according to A.M. and P.M.? Does a button need to be pressed more than once?
11 Transfer/Application	You should be able to adjust and change the time correctly when changing time zones.
12 Problem Solving	The watch needs to be used as a stopwatch and as an alarm.
13 Self-assessment	Are the time and date set correctly? Did you meet the criteria?
14 Research	Look at improving the design of digital watches.

Ken was not so sure he understood the LPM although the simple example with the digital watch helped. He decided to use the LPM to analyze a past learning experience. Last year, he learned to play tennis. This had been a pretty successful learning experience for him, so he decided to apply the LPM to the experience. He printed a blank LPM form from the course web site and filled it out. The following is what he came up with.

The Learning Process Methodology: *Ken Learns to Play Tennis (by Ken)*

Scenario: I want to learn to play tennis. I'd like to learn it well enough to play as well as appreciate watching it on television. My son, Bobby, is beginning to play tennis at school, so I'd like to know enough to help him. Next fall, we may go to New York City to watch the US Open together.

Step	Explanation
1 Why	We didn't have tennis in my high school, and I always wondered what it would be like to play. Tennis is interesting to me on many levels. First of all, it is good exercise. Second, while it is fun to watch on television now, it would be even more entertaining if I understood the rules of the game.
2 Orientation	I have a passing familiarity with the game, having watched it on TV. I've reviewed the basic rules of the game on a couple of web sites. I know that I'll be focusing on playing singles and on a community court. Nothing fancy, in other words!
3 Prerequisites	Includes eye-hand coordination, the ability to read and interpret rules, and reasonable physical fitness and stamina.
4 Learning Objectives	I want to know enough about playing to keep up with Bobby and watch tennis matches with an appreciation for the skill and strategy used.

Step	Explanation
5 Performance Criteria	I can play a game well enough to enjoy competition with another player (whose skill level is close to my own), rather than focusing only upon the skills I'm working to develop.
6 Vocabulary	Terms to know: lines and locations: net, baseline, singles line; scoring: point, game, set, match; shots: forehand, backhand, serve, volley, overhead, lob, drop-shot; serve-related: ace, let, fault, double fault, foot fault
7 Information	There are many sources of information; my local bookstore has a nice selection of both books and DVDs. There are also many web sites that offer terminology, tips, and rules. Tennis classes or private lessons are another potential resource.
8 Plan	I plan to study videos of professional tennis players and to pay greater attention when I watch tennis on TV. Bobby said that his coach also recommends watching even amateur-level players and matches because in assessing their performance, actions, and strategy, you can strengthen your own mental game and decision-making.
9 Models	Study videos of pros; videotape myself and review with a tennis teacher; use games that will help me keep my eye on the ball.
10 Thinking Critically	How do I keep score? What are the most important things to remember about getting in the correct position to hit a forehand and backhand shot? How can I best monitor and maximize my physical condition in order to play well? How can I include my son and other family members in my new hobby?
11 Transfer/Application	Learning to play tennis will potentially help me understand other sports such as racquetball, squash, maybe even table tennis. I'll also learn more about keeping physically fit.
12 Problem Solving	Playing to capitalize on your own strengths and your opponent's weaknesses is a problem that tennis professionals routinely have to solve. I'll certainly need to think about that in order to play a competitive game, but I first need to work on my basic skills! My son has recommended a book, <i>Tennis for Beginners</i> , but all the pictures and instructions are for right-handed players, and I'm a leftie! I know the book will be helpful, but I've got to figure out how to adapt the information so that it's most useful for me. Maybe I can view the pictures reflected in a mirror...
13 Self-assessment	I plan to regularly self-assess my performance and improvement. I've developed a couple of questions that will allow me to gauge and assess my performance at least at the beginning: Can I understand enough of what is going on in a televised tennis match to discuss aspects of the match and player actions with Bobby? Also, can I play a game, enjoy myself, and keep an accurate score?
14 Research	Now that I've used a racket, I have a much better appreciation of how an alternative design could have an impact on different aspects of my game. I plan to do a bit of research regarding different racket options and costs.

WOW. This is a powerful tool and one that I can begin to use immediately in so many different contexts! I hate that I'm having some difficulty with factoring in my Algebra course. I see how I can use the LPM to outline precisely how I will tackle that problem. And this summer I'm taking an Officer Training Course where I'll need to learn the state codes inside and out; that will be another place to apply the LPM. Bobby's got the tennis thing under control (I'm not going to admit how often he skunks his old man!), but he IS having a tough time learning to play the guitar. The LPM will provide him with a way to "divide and conquer" that challenge. It won't mean he or ANY of us don't need to practice, but it does give an incredible structure for tackling a learning activity. Oh, and I'm restoring a 1972 Norton Commando motorcycle on the weekends and learning as I go. While I probably won't need to use all the steps of the LPM, that project has dragged on long enough that I COULD use a new way to move things along. Then there's my sister who is taking a beginning pottery course...



Notes



IN MY CLASS

Analyzing the Learning Process Methodology (LPM)

WHY

The process of learning is the focal point of this course and is essential for success in college and throughout your life. In this activity, we will review sections of the LPM to increase your understanding of each step.

LEARNING OBJECTIVES

This learning activity will teach you to:

Gain a better understanding of the Learning Process Methodology and how it can be used to develop proficiency in completing complex tasks.

PERFORMANCE CRITERIA

If you successfully complete this activity, you will be able to:

- Identify key steps of the Learning Process Methodology
- Articulate, in summary, two strong insights about the learning process

MODEL

See *The Learning Process Methodology: A Simple Example* and *The Learning Process Methodology: Ken Learns to Play Tennis (by Ken)*, both contained in the reading for this experience.

PLAN

1. Review the Learning Process Methodology and share any questions you have about it.
2. Working individually, review the two examples of the LPM (the digital watch and Ken's tennis example) and complete the Assessment Column for Ken's example using the **Learning Process Methodology Form** available in the resources for this experience.
3. Discuss your results in the Assessment Column in your group.
4. Answer the Critical Thinking Questions as a group, recording the answers in your own book.

RESOURCES

Learning Process Methodology Form

CRITICAL THINKING QUESTIONS

1. What steps of the LPM should be done in preparation for learning and why?

2. Identify the steps in the LPM that will help keep you focused on the task at hand, reducing the chance that you'll "spin your wheels."
3. What is the importance of the vocabulary step of the LPM, and how does language support the processing of information?
4. What is the value of critical thinking questions for learning?
5. Which step(s) of the LPM is (are) critical to improving your learning performance in the future? Why?
6. How would you explain the LPM (in simple terms) to others?

Learning Process Methodology Form (for Ken's use of the LPM)

On your own or in a group, provide as many strengths, improvements and insights you can think of, and place them in the third column.

Step	Explanation	Assessment
1 Why	We didn't have tennis in my high school, and I always wondered what it would be like to play. Tennis is interesting to me on many levels. First of all, it is good exercise. Second, while it is fun to watch on television now, it would be even more entertaining if I understood the rules of the game.	Strength: Improvement: Insight:
2 Orientation	I have a passing familiarity with the game, having watched it on TV. I've reviewed the basic rules of the game on a couple of web sites. I know that I'll be focusing on playing singles and on a community court. Nothing fancy, in other words!	Strength: Improvement: Insight:
3 Prerequisites	Includes eye-hand coordination, the ability to read and interpret rules, and reasonable physical fitness and stamina.	Strength: Improvement: Insight:
4 Learning Objectives	I want to know enough about playing to keep up with Bobby and watch tennis matches with an appreciation for the skill and strategy used.	Strength: Improvement: Insight:
5 Performance Criteria	I can play a game well enough to enjoy competition with another play (whose skill level is close to my own), rather than focusing only upon the skills I'm working to develop.	Strength: Improvement: Insight:
6 Vocabulary	<i>lines and locations:</i> net, baseline, singles line <i>scoring:</i> point, game, set, match <i>shots:</i> forehand, backhand, serve, volley, overhead, lob, drop-shot <i>serve-related:</i> ace, let, faults, foot fault	Strength: Improvement: Insight:
7 Information	There are many sources of information; my local bookstore has a nice selection of both books and DVDs. There are also many web sites that offer terminology, tips, and rules. Tennis classes or private lessons are another potential resource.	Strength: Improvement: Insight:

Step	Explanation	Assessment
8 Plan	I plan to study videos of professional tennis players and to pay greater attention when I watch tennis on TV. Bobby said that his coach also recommends watching even amateur-level players and matches because in assessing their performance, actions, and strategy, you can strengthen your own mental game and decision-making.	Strength: Improvement: Insight:
9 Models	Study videos of pros; videotape myself and review with a tennis teacher; use games that will help me keep my eye on the ball.	Strength: Improvement: Insight:
10 Thinking Critically	How do I keep score? What are the most important things to remember about getting in the correct position to hit a forehand and backhand shot? How can I best monitor and maximize my physical condition in order to play well? How can I include my son and other family members in my new hobby?	Strength: Improvement: Insight:
11 Transfer/ Application	Learning to play tennis will potentially help me understand other sports such as racquetball, squash, maybe even table tennis. I'll also learn more about keeping physically fit.	Strength: Improvement: Insight:
12 Problem Solving	My son has recommended a book, <i>Tennis for Beginners</i> , but all the pictures and instructions are for right-handed players, and I'm a leftie! I know the book will be helpful, but I've got to figure out how to adapt the information so that it's most useful for me. Maybe I can view the pictures reflected in a mirror...	Strength: Improvement: Insight:
13 Self-Assessment	I plan to regularly self-assess my performance and improvement. I've developed a couple of questions that will allow me to gauge and assess my performance, at least at the beginning: Can I understand enough of what is going on in a televised tennis match to discuss aspects of the math and player actions with Bobby? Also, can I play a game, enjoy myself, and keep an accurate score?	Strength: Improvement: Insight:
14 Research	Now that I've used a racket, I have a much better appreciation of how an alternative design could have an impact on different aspects of my game. I plan to do a bit of research regarding different racket options and costs.	Strength: Improvement: Insight:



MY LEARNING & GROWTH

CHALLENGE

There are key steps in the LPM that are very critical for effective and efficient learning: Use of prior knowledge (prerequisites), Language development, Critical thinking, and Generalizing. Here are some prompts that will help you focus on these key steps:

1. What do I already know that will be useful in learning this new knowledge?
2. What are the key words and their meanings?
3. What are the important questions that need to be answered so that I understand the knowledge?
4. How do I generalize this knowledge to produce transferable knowledge?

TOOLS/WORKSHEETS

Learning Journal worksheets My Life Vision worksheet

PREPARATION

Think about your other classes and learning opportunities coming up in the next week. Apply the Learning Process Methodology to one of those opportunities to construct Level 3 learning. Share what you learned afterward through the use of the **Learning Journal worksheet**.

PROBLEMS TO SOLVE

Now it's your turn to learn something for yourself. Decide on something you've wanted to learn for a while, and use the LPM to make a strong start. Document what you learned with a **Learning Journal worksheet**.

MY LIFE VISION

Complete the 2-page **My Life Vision worksheet**, sharing things that you want to learn in your life and why. Think of it as a kind of "bucket list" for the mind.

HOW I'M DOING *Self-growers understand that reviewing performance as they strive for improvement is valuable. Recognizing our gains and growth as well as areas where we still need to work is important.*

ACTIVITY END

Name _____

Focus or Course _____

Learning Journal



What I learned:	What triggered the learning?
How do I know I've learned it? (validate your learning)	Why is it important?
How will I apply my new knowledge now?	How can I apply my learning in the future?

Name _____

Focus or Course _____

Learning Journal



What I learned:

What triggered the learning?

How do I know I've learned it? (validate your learning)

Why is it important?

How will I apply my new knowledge now?

How can I apply my learning in the future?

Name _____

Focus or Course _____

Learning Journal



What I learned:

What triggered the learning?

How do I know I've learned it? (validate your learning)

Why is it important?

How will I apply my new knowledge now?

How can I apply my learning in the future?

My Life Vision

(continued on the other side)

Name _____ Date _____

Topic *Things I Want to Learn in My Life*
