



# Incorporating Common Educational Approaches to Help Pharmacists Improve Therapeutic Outcomes

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# Learning Objectives:

At the end of this activity, participants will be able to:

- ▶ **Recognize four learning styles** commonly seen in the American population
- ▶ Associate **specific tools** to help patients better achieve health outcomes
- ▶ Review varied **educational approaches** for specific, commonly seen pharmaceutical products

# Impact of Non-Adherence:

- ▶ About **1/3 of All Rx's are Never Filled** by Patients
- ▶ About **50% of All Rx's are Not Continued** by Patients
  - ▶ Especially after 6 months of Therapy
  - ▶ Hypertension = 51% Non-Adherence
  - ▶ Statins = Up to 50% in 1<sup>st</sup> Year
- ▶ Non-Adherence → **~50% of Treatment Failures**
- ▶ **Cost per Year: \$390 Billion!**

Walsh J, McDonald K, Shojania K, et al. Quality improvement strategies for hypertension management: a systematic review. *Medical Care* 2006;44:646-57; Viswanathan M, Golin CE, Jones CD, Ashok M, Blalock SJ, Wines RC, et al. Interventions to improve adherence to self-administered medications for chronic diseases in the United States: a systematic review. *Ann Intern Med* 2012; 157(11):785-795.

Choudhry 2011, *N Engl J Med*; Yeaw 2009, *J Manag Care Pharm*; Script Your Future press release, November 2, 2011; accessed here: <http://scriptyourfuture.org/wp-content/themes/cons/m/release.pdf>.

<http://scriptyourfuture.org/wp-content/themes/cons/m/release.pdf>; Osterberg 2005, *NEJM*; Ho 2009, *Circulation*  
Ho 2009, *Circulation*; Edmondson 2013, *Br J of Health Psychology*; George & Shalansky 2006, *Br J Clin Phar*

# The Large Gulf Between a Written Prescription and the Intended Treatment for the Patient

Patients are vulnerable to gaps or discontinuation at many points during treatment.

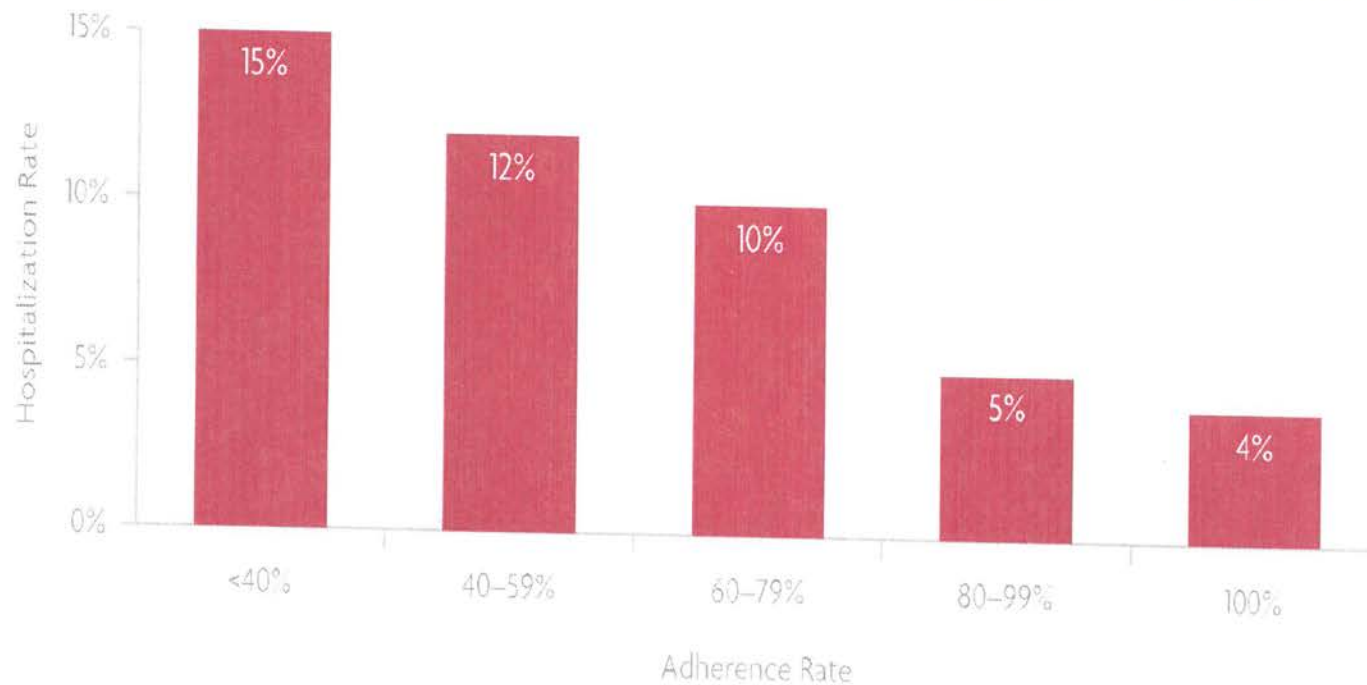


Source: NACDS\*

# Outcomes Improve as Adherence to Prescribed Medicines Increases

Non-adherent diabetes patients were 2.5 times as likely to be hospitalized as those who followed their prescribed treatment.

*Hospitalization Rate among Diabetes Patients by Level of Adherence to Oral Antihyperglycemic Medication\**



\* Adherent patients defined as patients with a "medication possession ratio" (i.e., the sum of the "days of supply" of prescriptions filled divided by the number of days in the year) of 80% or higher.

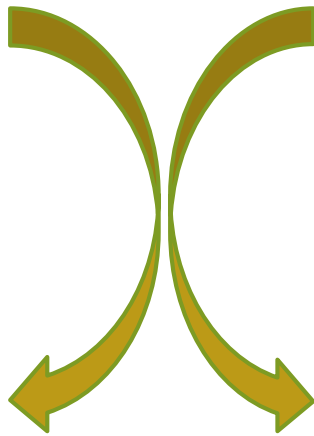
Source: D.T. Lau and D.P. Nau<sup>7</sup>

# Provider Factors Influencing Patient Non-Adherence:

- ▶ Communication skills
- ▶ Knowledge of health literacy issues
- ▶ Lack of empathy
- ▶ Lack of positive reinforcement
- ▶ Number of comorbid conditions
- ▶ Number of medications needed per day
- ▶ Types or components of medication
- ▶ Amount of prescribed medications or duration of prescription

# Effective Communication:

## Key to Assuring Excellent Health Outcomes!



**Effectiveness**

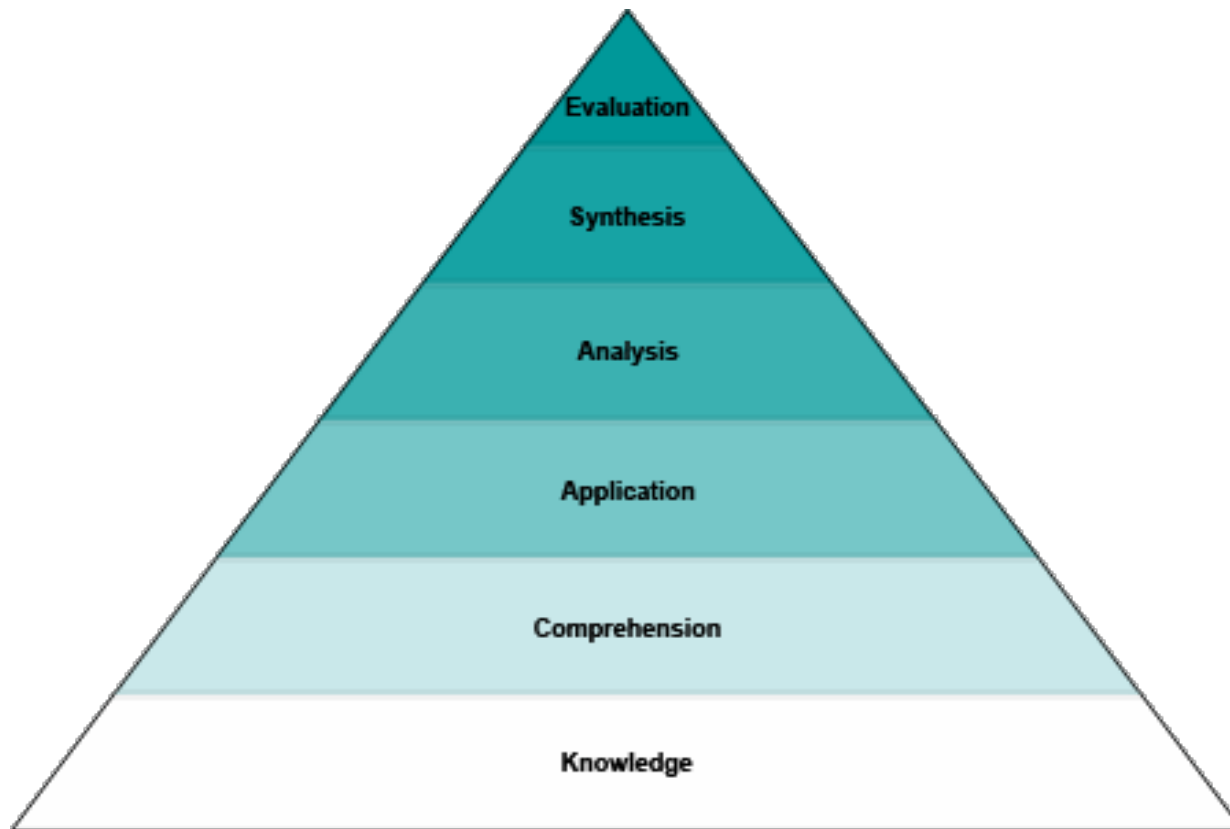
**Communication**

Ratanawongsa 2012 Arch Intern Med ; Bramley 2006 J Manag Care Pharm 12(3):239-245; Martin 2011 Am J Health Promot 25(6):372-378

Walsh J, McDonald K, Shojania K, et al. Quality improvement strategies for hypertension management: a systematic review. Medical Care 2006;44:646-57; Viswanathan M, Golin CE, Jones CD, Ashok M, Blalock SJ, Wines RC, et al. Interventions to improve adherence to self-administered medications for chronic diseases in the United States: a systematic review. Ann Intern Med 2012; 157(11):785-795.



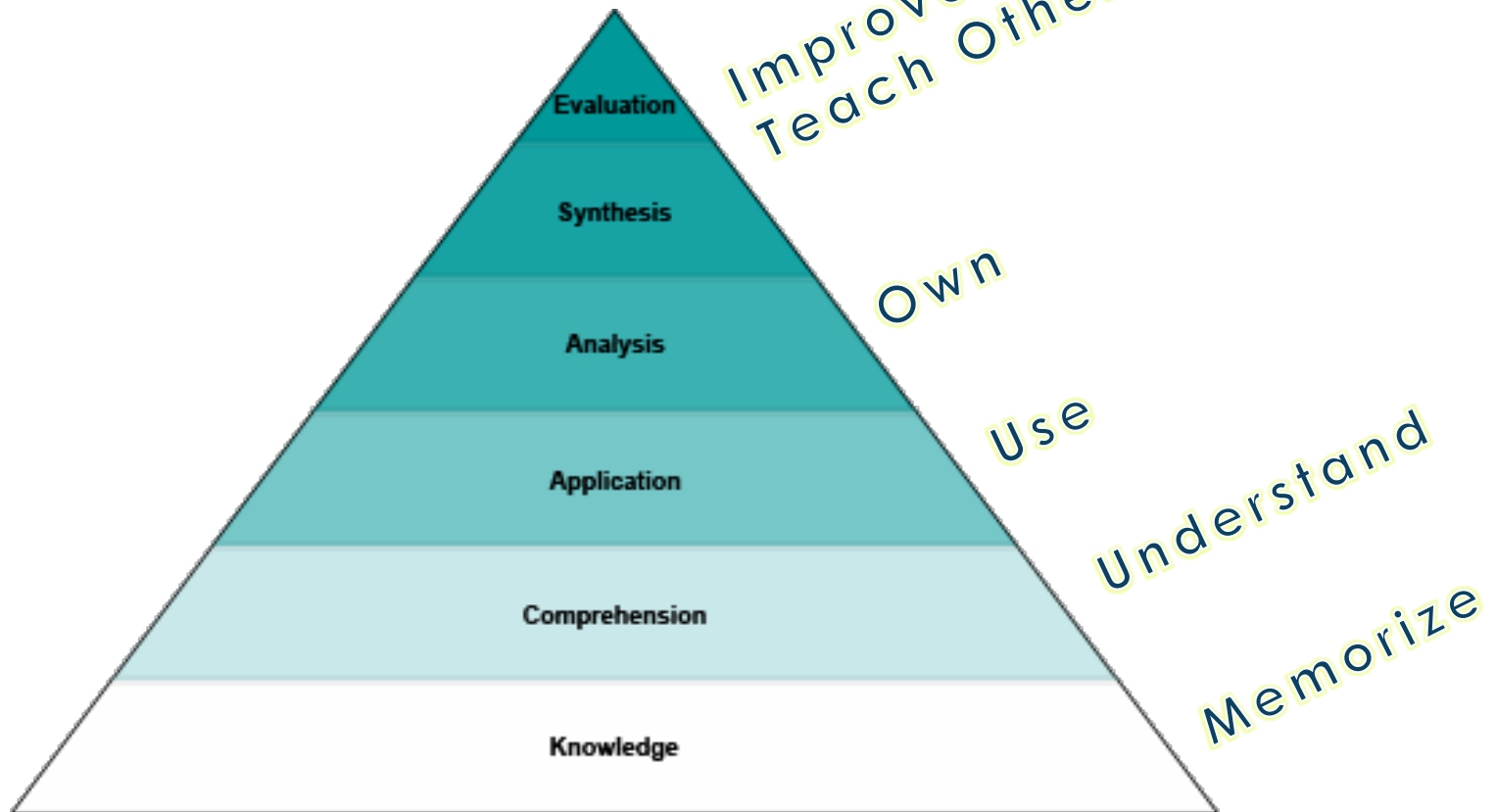
# Bloom's Taxonomy



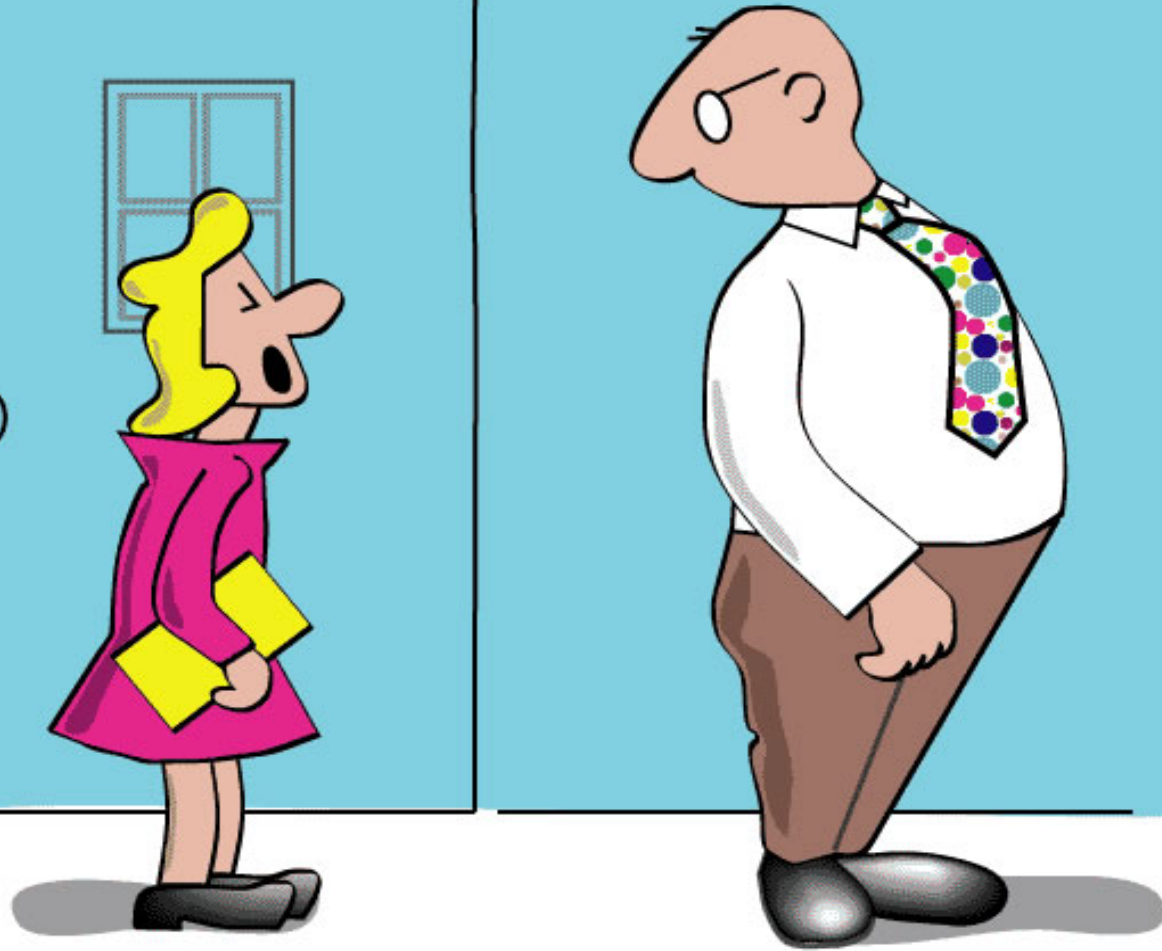
Bloom's Taxonomy of learning. Adapted from: Bloom, B.S. (Ed.) (1956) Taxonomy of educational objectives: The classification of educational goals. Handbook I, cognitive domain. New York ; Toronto: Longmans, Green.



# Bloom's Taxonomy



Bloom's Taxonomy of learning. Adapted from: Bloom, B.S. (Ed.) (1956) Taxonomy of educational objectives: The classification of educational goals. Handbook I, cognitive domain. New York ; Toronto: Longmans, Green.



"As we start a new school year, Mr. Smith,  
I just want you to know that I'm an Abstract-  
Sequential learner and trust that  
you'll conduct yourself accordingly!"

*Browning*

# How Can This Approach Help?

## ▶ Patient Understanding

- ▶ Recognize how each patient may learn **differently**
- ▶ More effective **outcome results**
  - ▶ Pharmacist's Responsibility!!
    - ▶ Provider Status
  - ▶ Prevent Adverse Events

## ▶ Pharmacist's Effectiveness

- ▶ Better understand our patient mix
- ▶ How we can better tailor counseling approaches
  - ▶ Sequential vs Global
  - ▶ **Incorporate more active-learning**
- ▶ Effective **member of healthcare team**

# Eliciting an Emotional Response:

- ▶ **Fastest Learning When:**
  - ▶ **Inspire**
    - ▶ Demonstrate Admirable Qualities
  - ▶ **Infuriate**
    - ▶ Incite an Argument → Synthesis
  - ▶ **Scare**
    - ▶ Consequences
  - ▶ **Provide Experience**
    - ▶ Re-live it

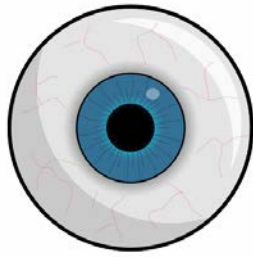
# Repetition:

Most Require Exposure

**4 to 6 Times**

Before “hardwiring” occurs

# Focus on Learning Styles:



Visual



Auditory



Read/Write



Kinesthetic





# Focus on Learning Styles

## Visual Learners Tools:

Pictures

Flow  
Charts

Diagrams

Graphs

Flash  
Cards

Symbols

Underlining

Highlighters

Multi-Colored Pens



# Focus on Learning Styles

## Visual Learners Tools:


**Creating Their Own  
Images**  
Reproduce them  
from memory

**Condensing Notes**  
Review notes  
they create

**Replacing Words  
With Symbols**

# Focus on Learning Styles

## Visual Learners Tools → Caution!

- ▶ They...
    - ▶ Watch a **Movie**
    - ▶ View a **PowerPoint** Presentation
    - ▶ Review **Someone Else's Notes**
- 

# Focus on Learning Styles

## Auditory Learners Tools:

Attend Class  
or Group Discussions

Explain Ideas  
Out Loud

Listen to  
Recordings

Retell  
Stories

Hear Self  
Speak

Webinars/  
Tutorials

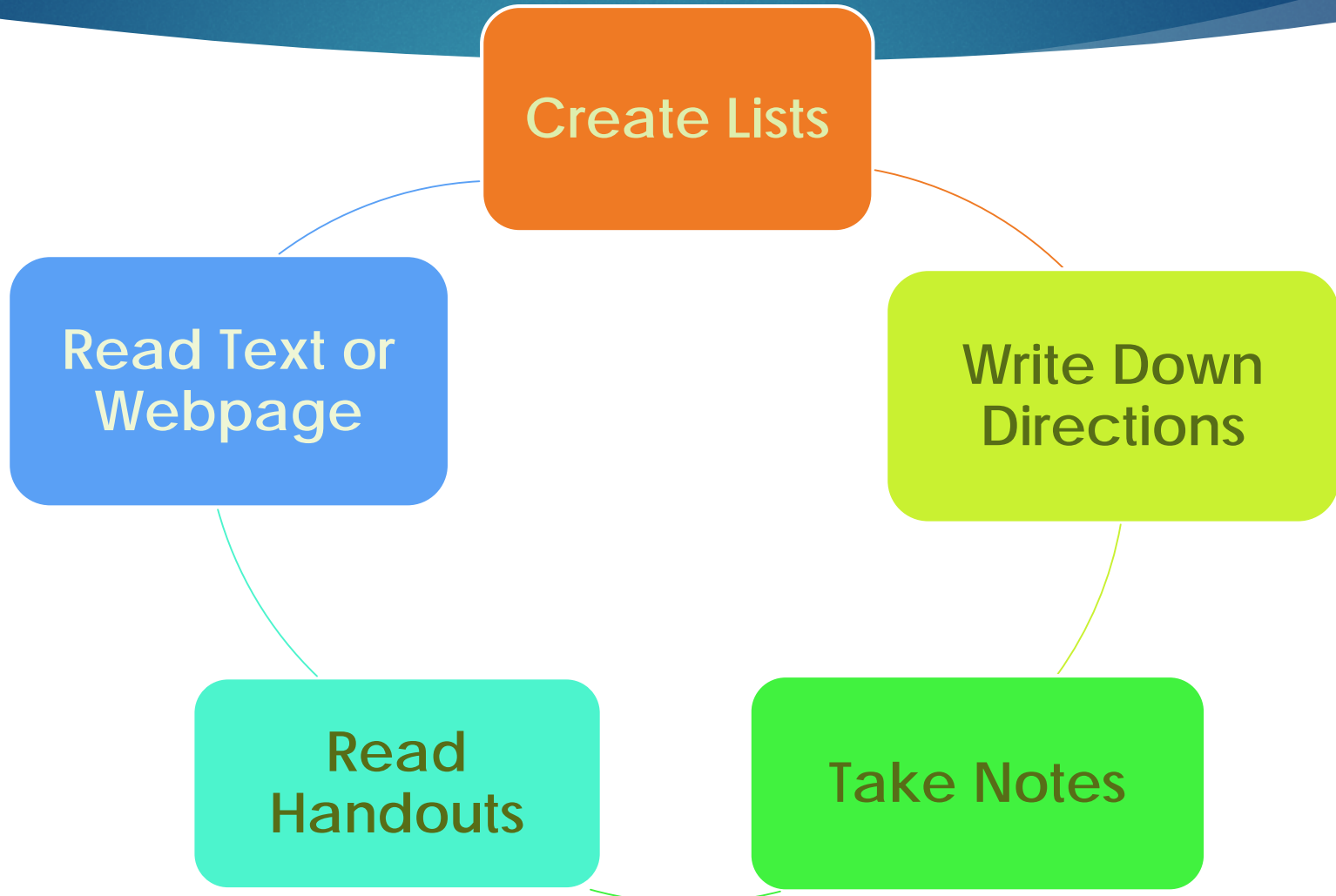
# Focus on Learning Styles

## Auditory Learners Tools:



# Focus on Learning Styles

## Read/Write Learners Tools:



# Focus on Learning Styles

## Read/Write Learners Tools:

**Condense their notes**

Read paragraph and write a synopsis.

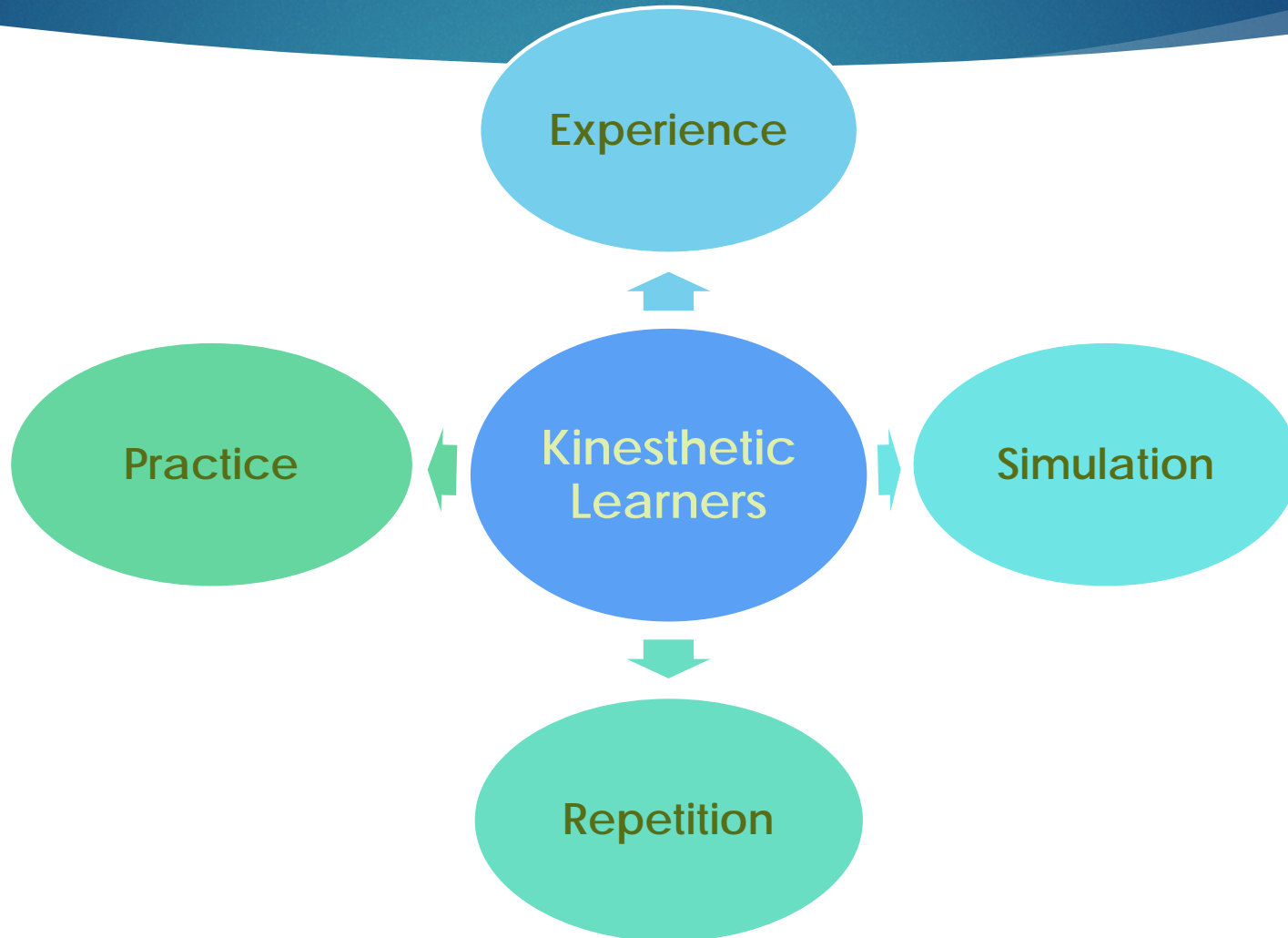
**Describe**

diagrams and charts  
In short, written statements

**Rewrite their notes several times**  
Word-for-Word

# Focus on Learning Styles

## Kinesthetic Learners Learn Best:





# Focus on Learning Styles

## Kinesthetic Learners Tools:

Hands-on

Field Trips

Practice with  
Samples

Real Life  
Examples

Participate in a  
group activity

Trial and Error

Use All of  
Their Senses

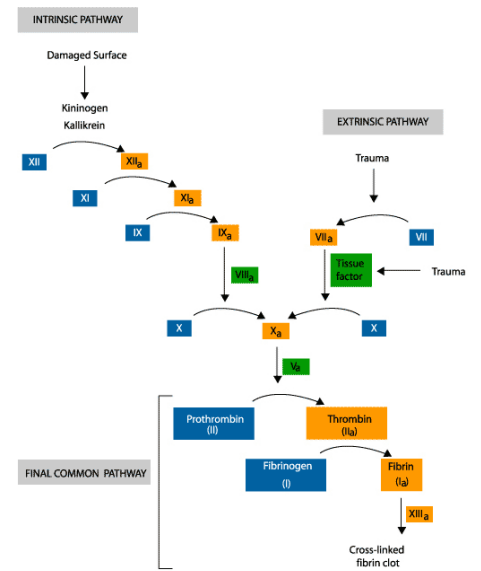
Watch an  
Exhibition

# Focus on Learning Styles

## Global vs Sequential:

- ▶ **Global** (Why?)
  - ▶ Need “**big picture**” first
  - ▶ Easily confused by **lack of context**

- ▶ **Sequential** (How?)
  - ▶ Need “**step-by-step**” presentation
  - ▶ Easily confused by **missing steps**



# Focus on Learning Styles Global vs Sequential:

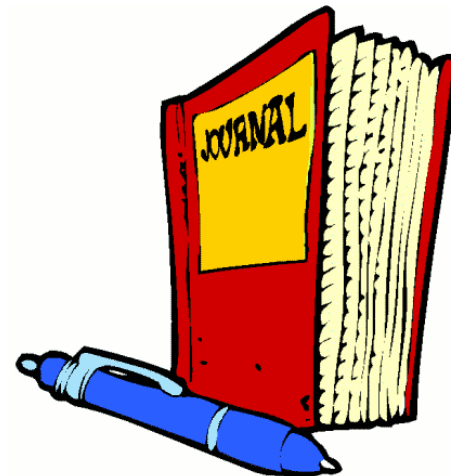
SHOW  
AND  
TELL

## ▶ Active

- ▶ **Need to participate** for best learning
    - ▶ Difficulty relating without participation
- 

## ▶ Reflective

- ▶ **Need to think through** situation
  - ▶ Often linking to similar experiences



Level of **Involvement**

We Tend to **Remember**

**Passive**

Reading

10% of What We Read 10%

Hearing  
Words

20% of What We Hear 20%

Looking at  
Pictures

30% of What We See 30%

Watching a Movie

Looking at an Exhibit

Watching a Demonstration

Seeing it Done on Location

50% of What We  
See & Hear 50%

Participating in a Discussion

70% of What  
We Say 70%

Giving a Talk

Doing a Dramatic Presentation

Simulating the Real Experience

90% of  
What We  
Say &  
Do 90%

Doing the Real Thing

**Active**

**Application:**

**“Patient Counseling”  
on Bass Guitar**

# “Patient Counseling” for Bass Guitar

- ▶ **Step 1:** Please play the note on the top string at the 3<sup>rd</sup> fret (G). Then play the note on the second string at the 2<sup>nd</sup> fret (B). Then play the note on the second string at the 5<sup>th</sup> fret (D). Then play the note on the second string at the 2<sup>nd</sup> fret (B). Then play the note on the top string at the 3<sup>rd</sup> fret (G). Repeat this musical phrase again.
- ▶ **Step 2:** Now play the note on second string at the 3<sup>rd</sup> fret (C). Then play the note on the third string at the 2<sup>nd</sup> fret (E). Then play the note on the third string at the 5<sup>th</sup> fret (G). Then play the note on the third string at the 2<sup>nd</sup> fret (E). Then play the note on the second string at the 3<sup>rd</sup> fret (C). Repeat this musical phrase again.
- ▶ **Step 3:** Finally, play the note on the second string at the 5<sup>th</sup> fret (D). Then play the note on the third string at the 4<sup>th</sup> fret (F#). Then play the note on the third string at the 7<sup>th</sup> fret (A). Then play the note on the third string at the 4<sup>th</sup> fret (F#). Then play the note on the second string at the 5<sup>th</sup> fret (D).
- ▶ Go back to step 2 and just play it once.
- ▶ End by playing step 1 once but add a last note by playing the second string at the 5<sup>th</sup> fret.
- ▶ Repeat if you'd like. Good luck!

# Application:

- ▶ **Teaching Bass Guitar vs Patient Counseling**
  - ▶ How do we **currently counsel** most of our patients?
    - ▶ Albuterol Inhaler
    - ▶ Advair Inhaler
    - ▶ Glucometer
  - ▶ Is this the **best way**?
    - ▶ For ALL of our Patients?
    - ▶ For ANY of our Patients?
    - ▶ For the Pharmacist?



# Summary:

- ▶ Pharmacists Must Lead the Way in Improving Patient Outcomes
- ▶ Understanding **HOW** We Learn:
  - ▶ Improves Effectiveness of Communication
    - ▶ Tailor Patient Learning Opportunities
  - ▶ Assure Optimal Effectiveness in Therapeutic Approaches

# Challenge:

## Reflect on Your Usual Approaches to Coaching Patients

How Effective are These Approaches?

How Could These Improve?

What Two Changes Could You Implement Right Away?

# Learning Styles Assessment:

Please complete provided  
learning styles assessment