

Project Management Institute

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CSF – “soft factors” (fluff?)

- Business Plan and Vision
- Top-Management Support (including funding)
- Organizational Culture
- People and Teams
- Change Management
- Effective Communication
- Knowledge Management
- Knowledge Transfer

Process and Project Management

- Projects are Processes
- Critical Success Factors (CSF)
- Tips and Ideas:
 - Always Understand “Big Picture”
 - Beware of Fads
 - Models and Mapping
 - Goals: Effectiveness and/or Efficiency
 - Tools and Techniques (process analysis)

CSF – hard factors?

- Process (project) Organizational Structure
- Strategy => process goals
- Mapping (flowcharts vs. Top-Down?)
- Policies and Guides (IKEA, 85 % of Improvements?)
- Manage the Critical Path (80/20 rule)
- Manage the White Space (VA vs. Waste, 85 of problems?)
- Standardization (PapiNet, Axel Springer)
- Education and Training (skills and expertise)
- Monitoring, Performance Evaluation (measurements)
- Analysis and Improvements (tools)

Management Fads

- “...out of disintegrating fads come remnants, which, often under new names, become new fads...” (Gibson and Tesone, 2001)
- “...as with any fashion trend, discussions of contemporary techniques tend to be much more positive...” (Staw and Epstein, 2000)

Seven Stage Lifecycle (Furnham, 2001)

- (1) an academic article on new discovery or theory
- (2) the study is discussed, summarized, and repeated
- (3) the concept is popularized in a best-selling book
- (4) throngs of management consultants
- (5) managers embrace and champion the concept
- (6) time passes and enthusiasm dims, and doubts and cynicism arise
- (7) new discoveries occur and consultant interest turns elsewhere.

Common Characteristics

(Miller and Hartwick 2002)

- (1) simple
- (2) prescriptive
- (3) falsely encouraging
- (4) universally relevant
- (5) easy to apply
- (6) speak to business issues of the day
- (7) interesting because of their novelty, and
- (8) given legitimacy by consultants and their successful devotees.

Does it Matter?

- “...practitioners and researchers are relearning old lessons by repeating past mistakes...” (Sarker and Lee 2002)
- “...problems occur because organizations forget what they have learned from previous projects...” (Milford and Stewart 2000)
- BOHICA (unknown...😊)

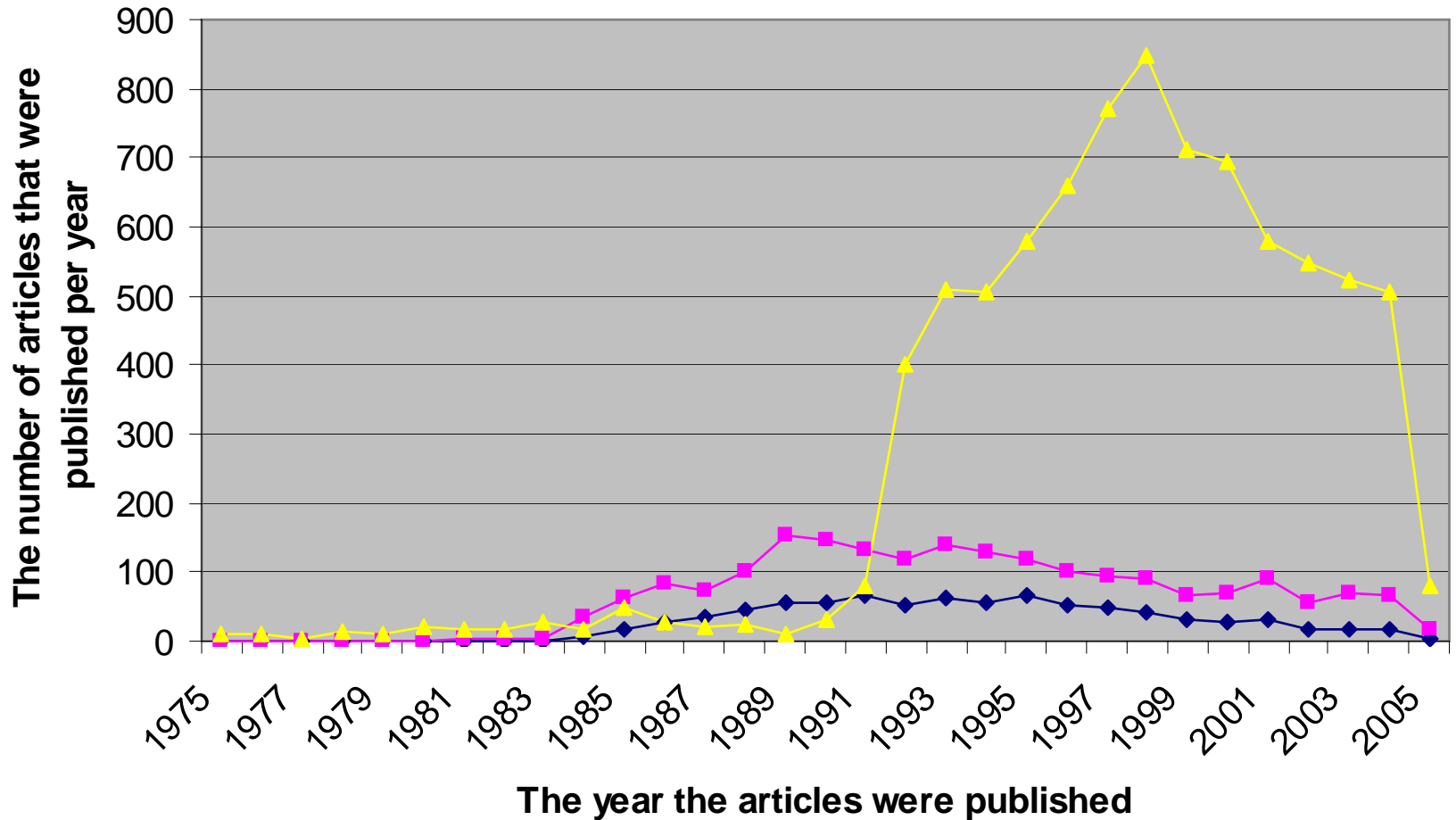
Reasons (perhaps all related)...

- Substantial, institutional and/or political factors (Wood and Caldas 2001)
- Copy (March and Olsen 1976, Staw and Epstein 2000)
- Security and Reassurance (Crainer 1996)

This Study

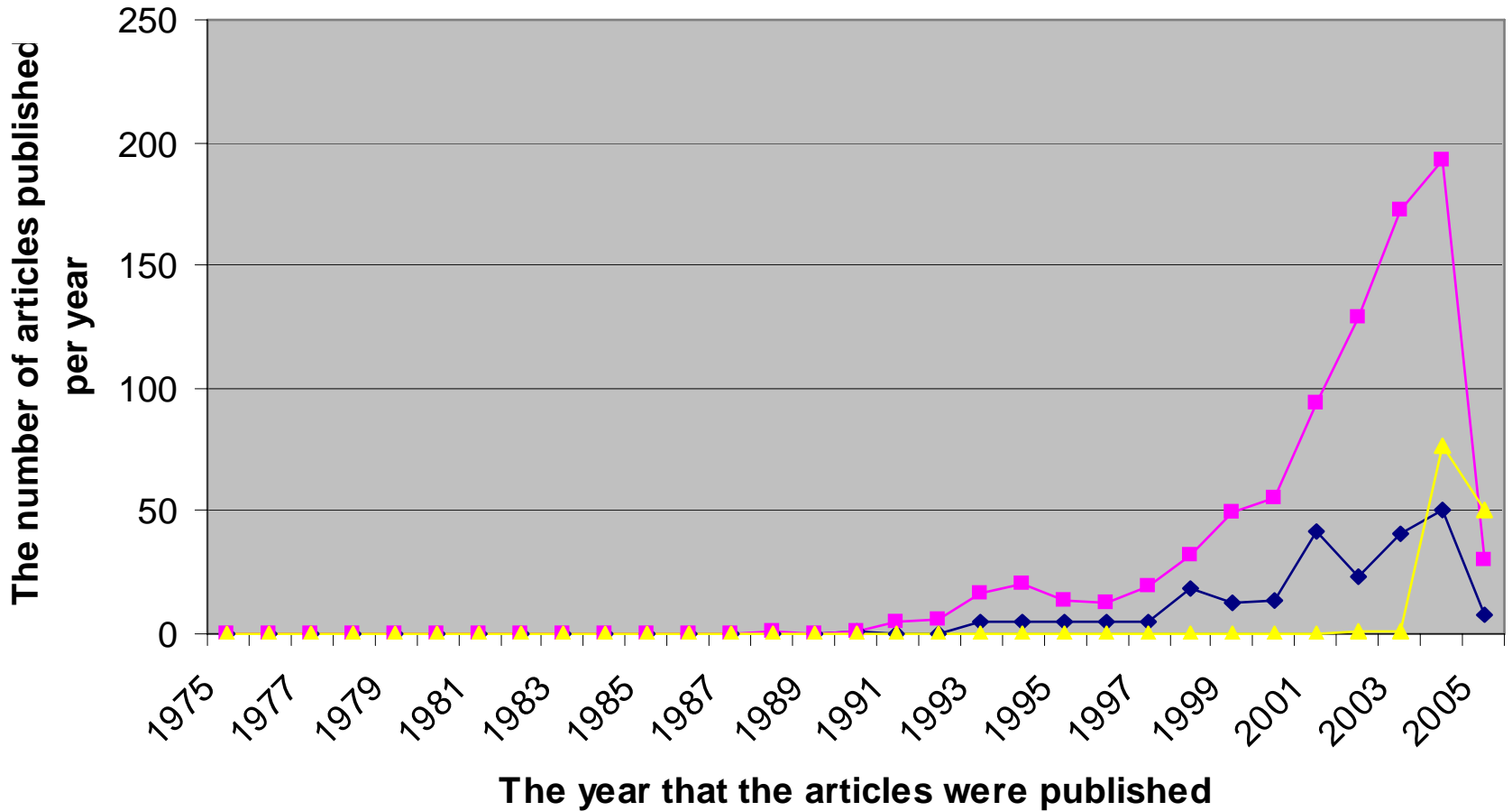
- JIT
- Lean
- TQM
- Six Sigma
- 30 years of publications (ABI Inform)
- Title, Abstract, Keyword
- Also: Purpose, Approach, Tools

JIT Article Time Line



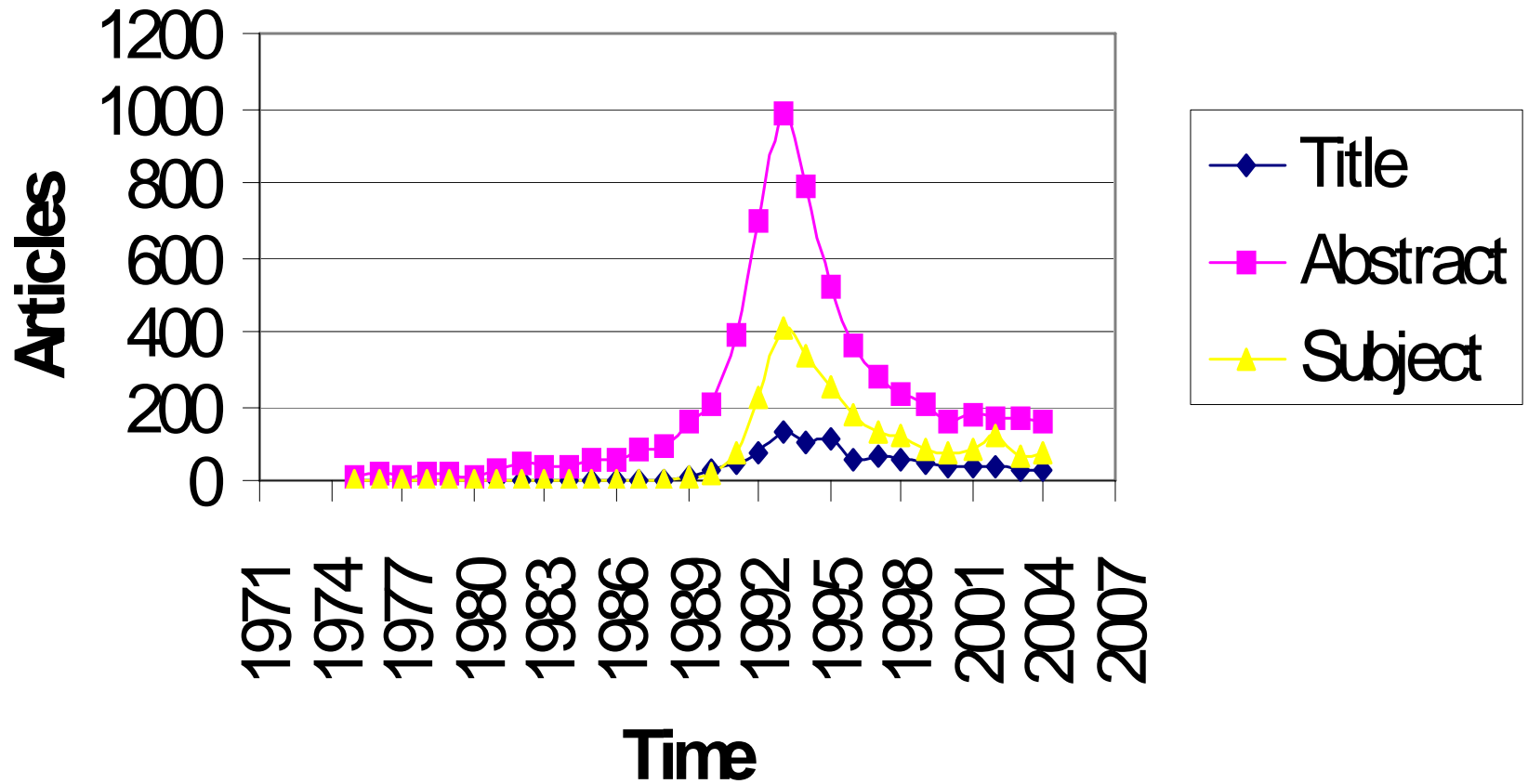
- ◆ The number of articles found with the word JIT in the TITLE
- The number of articles found with the word JIT in the ABSTRACT
- ▲ The number of articles found with the word JIT as the SUBJECT

Lean Article Time Line

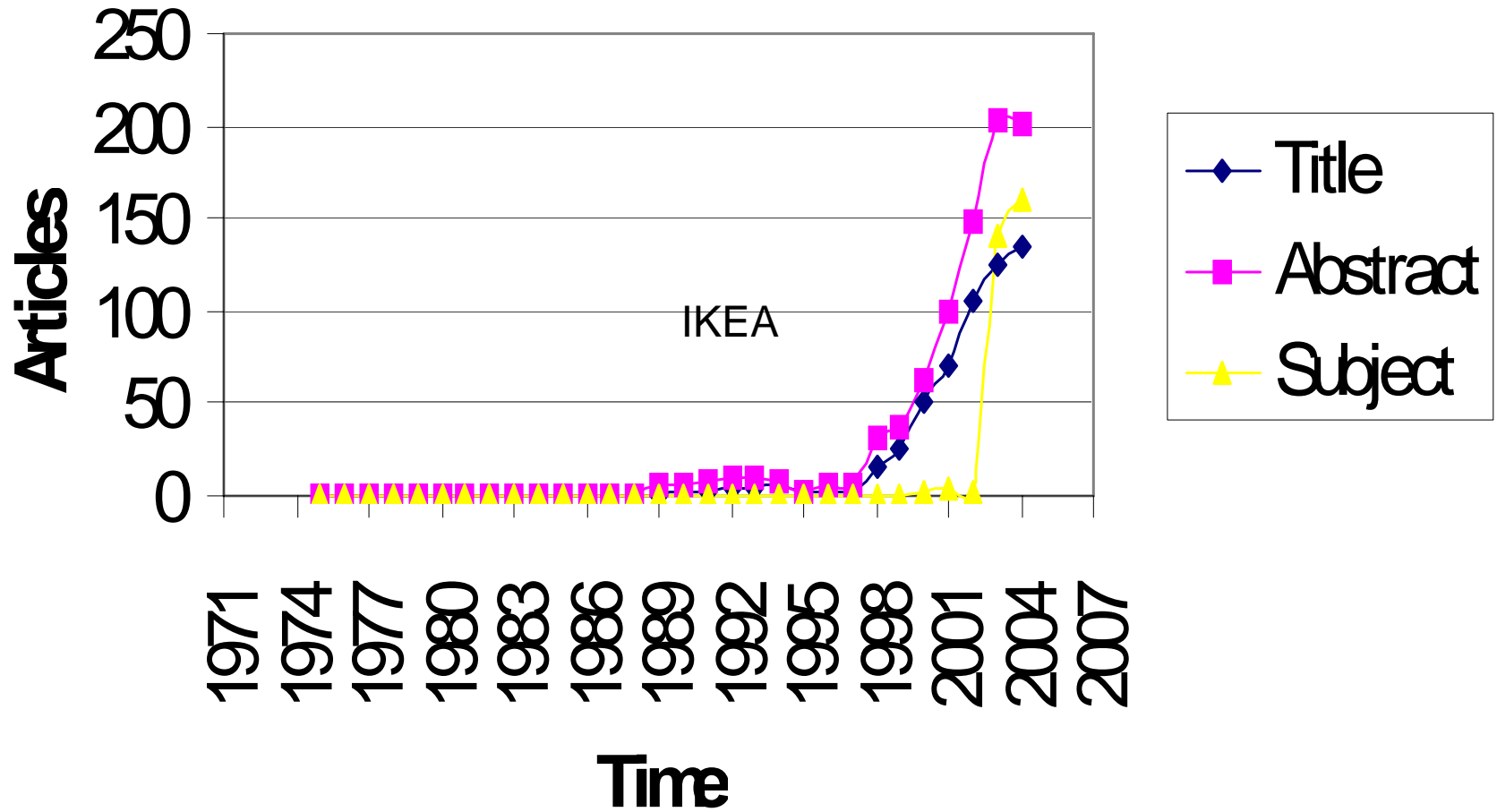


- ◆ The number of articles found with the word Lean in the TITLE
- The number of articles found with the word Lean in the ABSTRACT
- ▲ The number of articles found with the word Lean as the SUBJECT

Total Quality Management



Six Sigma



And now...

- Remember Effectiveness and/or Efficiency
- As a response to Six Sigma and Lean:
- Agility/flexibility
- Innovation (3m)

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Process Maps (mapping)

- A graphical presentation of the process
- Project: Critical Path
- Familiar (wrong?) version know as *flow charting*
- Numerous approaches exist (and tools)
- 2 versions of a process map are common:
 - As-is: the current state of the process
 - To-be: the goal state of the process
- Widely used. Not widely researched or understood.

Why Map Processes

- Increased understanding of process,
- Increase consensus about the process,
- Increased visibility into the process.
- Needed for strategy development...
- ...and the development of performance measurement systems...
- ...for structured change and improvements...
- ...and for education and training...and more...

Some Basic Rules

- A process can be made up of processes, often called sub-processes
- Defining “*the process*” and its boundaries depends on your perspective
- Levels are important
- And Guides perhaps even more
- The event that initiates a process could be part of a larger process.

The role of sub-processes (activities)

- Optimal sub-processes may not result in optimal customer processes
- Optimization of sub-processes usually leads to suboptimization of processes
- Sub-processes should be designed to contribute to global optimality.
- Carefully crafted sub-optimal (“inefficient”) sub-processes will be required for optimal customer outcomes

Many Mapping Methods Exist

- Top-down
- Critical Path
- Flowchart
- IDEFO
- Swimlanes
- Value stream mapping
- SCOR, GSCF and tons of consulting firms

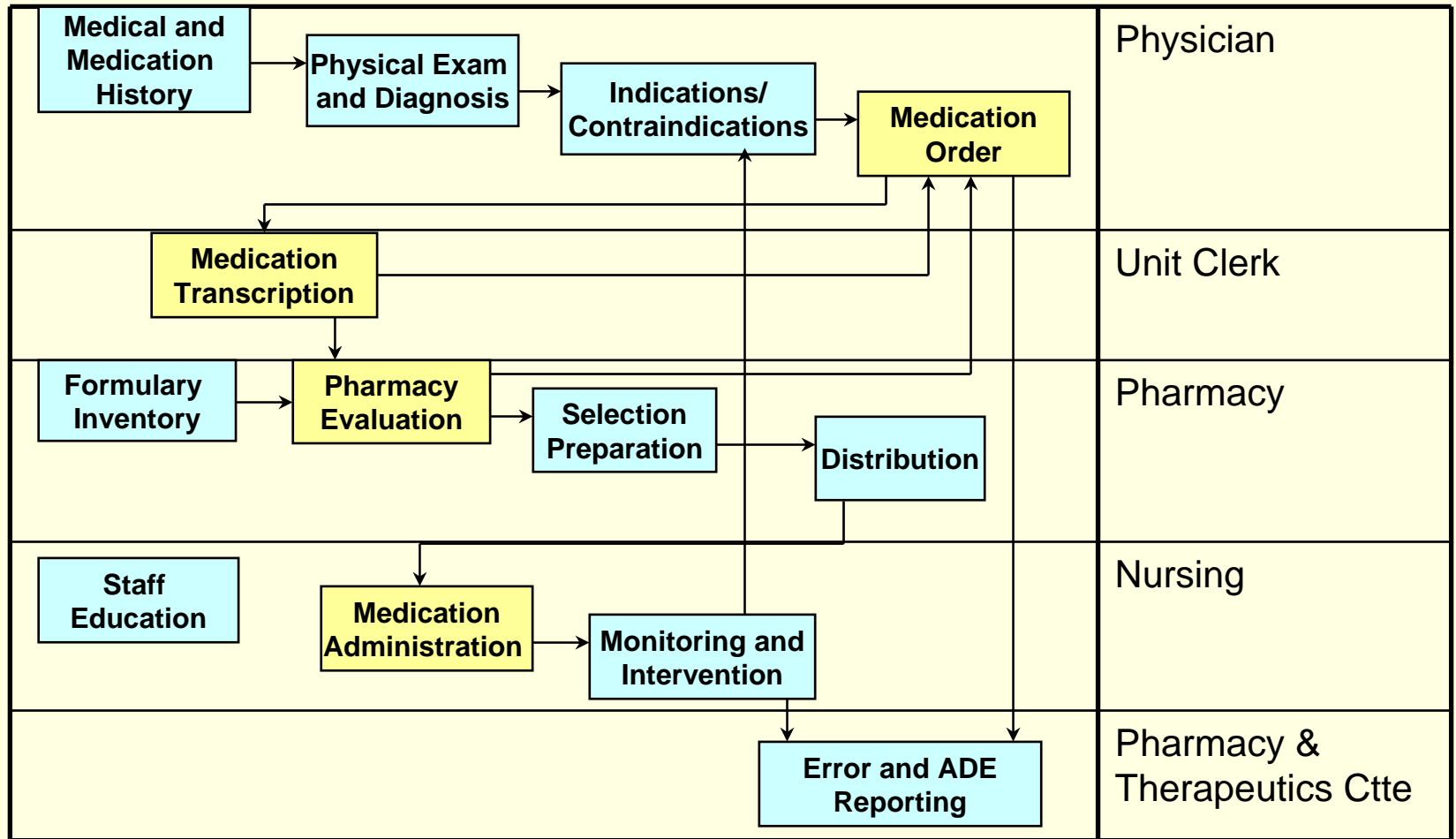
Top Down

- Systems Perspective
- Level of Analysis
- Customers and Stakeholders
- IGEO
- 85 % in the Guides?
- 80/20 – rule (Pareto)

Top-down (similar to node-tree)

Level	Process Detail	Purpose	Exercise Question	Process Illustration
1	Getting an MBA	Black Box Analysis/ Value	"Identify all process components."	
2	Quarters	Process Mapping Techniques	"How do we map 'getting an MBA'?"	
3	Quarter/Course	Process Goals / Different Processes	"Which courses added value to your MBA?"	
4	Class Activities	Classification of Activities Value-added	"Which activities added value to the class?"	
5	One Class Activity/Task	Process Change	"Which tasks added value to the activity?"	

Swim Lanes



Value Stream Mapping

- Popular in “lean”
- Includes information on elapsed time
- Value added versus waste analysis
 - Rother, Mike and Shook, John (1999) Learning to See, Brookline, MA: Lean Enterprises Institute Inc.
 - Tapping, Don, Shuker, Tom and Luyster, Tom (2002) Value Stream Management Productivity Press.

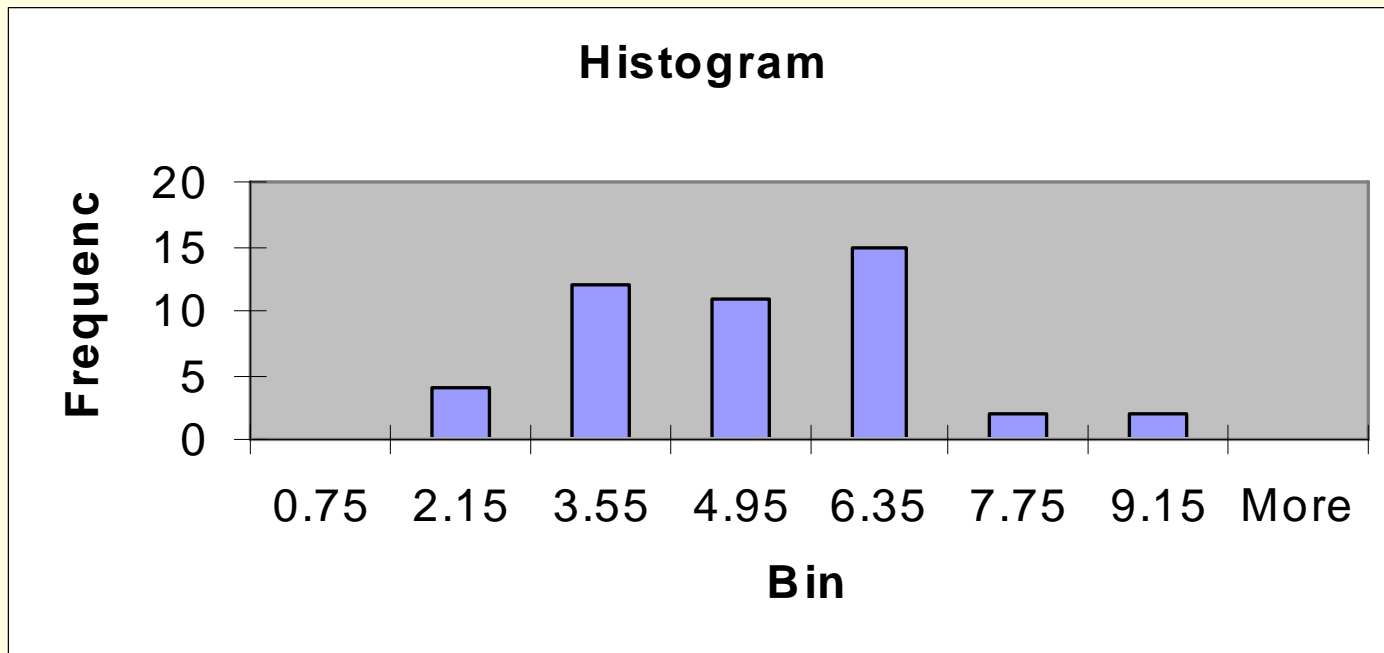
Tools and Techniques

7 Basic Quality techniques

- Histograms
- Pareto Charts
- Run Charts
- Scatter Diagrams
- Control Charts
- Flow Charts
- Cause and Effect Diagrams
- Six Sigma and Lean and...
- Other Tools

Histograms

- Collect data (40) and no of classes (6)
- Define max and min (8.95 and .79)
- Define width ($=8.16/6$) and use Excel



Pareto Charts

How does it Work?

- Similar like a Histogram; define categories, collect Data and sort them into the Categories. Count the occurrences for each category.
- Rank the categories starting with highest value.
- Draw cumulative points above all the bars and connect them into a line.

What is its use?

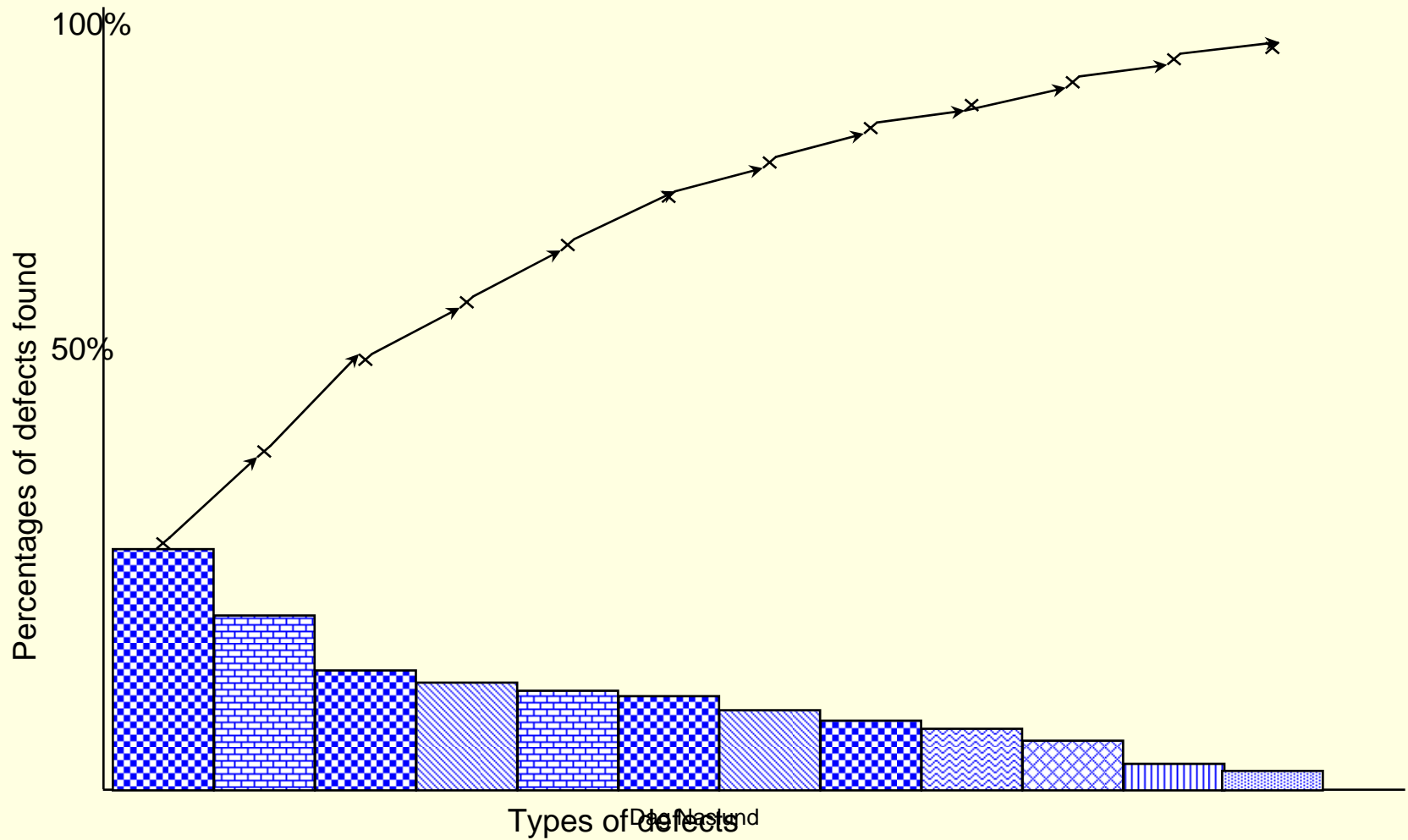
- Pareto Charts are used to apply the 80/20 rule of Joseph Juran which states that 80% of the problems are the result of 20% of the problems. A Pareto Chart can be used to identify that 20% route causes of problem.

Pareto Charts

Example:

- A certain machine has different kinds of failures that occur. The Maintenance department identifies these types of failures and counts their occurrence over a period of 3 months. The Data is then added up. The Failures are ranked by their occurrence values starting with the most frequently occurring failure.
- A histogram is drawn with bars representing the types of failures. Furthermore are cumulative values assigned to the failure types and drawn into the diagram.
- Now determine the point where the cumulative line crosses the 80% mark. Concentrate on the failure types that lie left of this mark.

Pareto Charts



Control Charts

What is it?

- Statistical tool, showing whether
- A process is in control or not

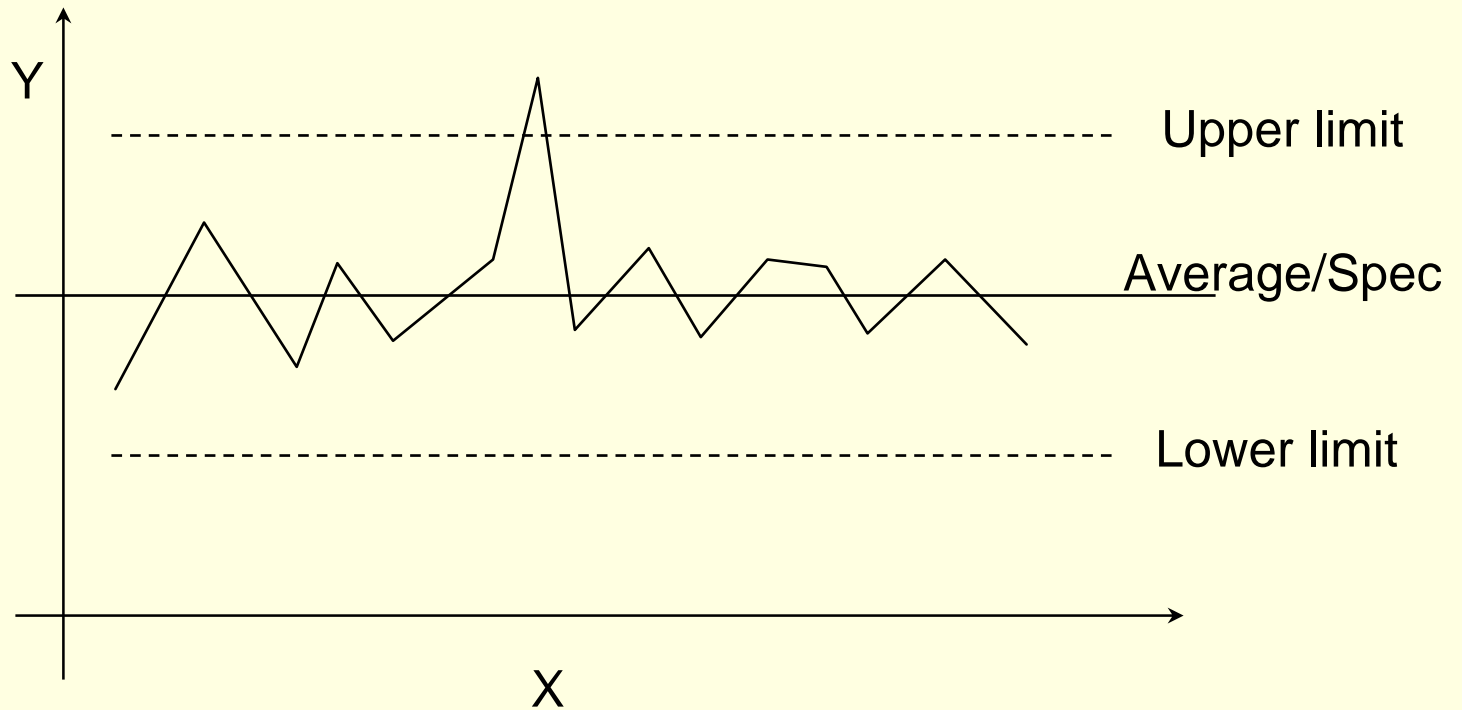
How does it Work?

- Define Upper limit, lower limit and medium value
- Draw Chart.
- Gather values and draw them into chart

What is its use?

- Taking samples of a process and detect possibility of process being out of control

Control Charts



Cause and Effect Diagrams

What is it?

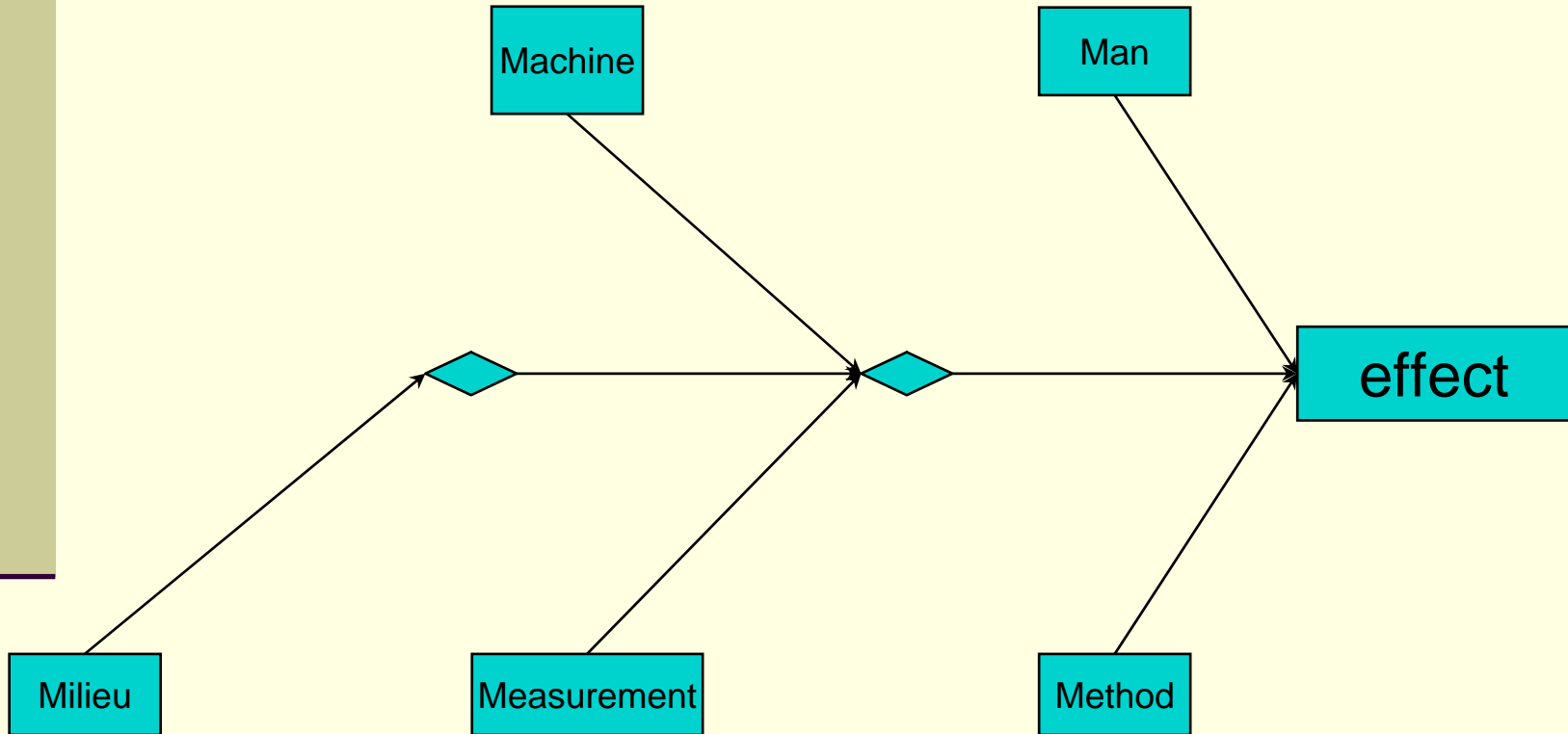
- demonstrates the relationship between Effects and the categories of their causes - Also called fish-bone or Ishikawa diagram

How does it Work?

- Determine the Problem you would like to examine, Categorize the possible causes
- Find subcategories and Describe the possible causes -

ASK WHY FIVE TIMES!!!

Cause and Effect Diagrams



Lean: Seeing the Waste



Value

- “Value is the overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988)

Customer Value

- = *perceived benefits – perceived costs.*

Lean : Defining Waste

Type of Waste	Definition
Correction	Doing something over which requires additional motion, processing, inventory and/or waiting
Overproduction	Generating excess parts, information, etc too soon or too fast in a process, may cause other forms of waste
Motion	Unnecessary work movements which do not add value to the product
Material Movement	Unnecessary transporting, storing or arranging of items, parts, equipment, people, etc.
Waiting	To remain in one place while doing something other than what is related to the task at hand
Inventory	Too much of anything which may take up space, lead to obsolescence, impact safety, cause waste of motion or waste of material movement
Processing	Doing something the customer does not perceive as adding value to the processing

Lean: Zero-waste Goals

Key	Zero- waste Goals
Customer Focus	Zero customer dissatisfaction
Leadership	Zero misalignment
Lean Organization	Zero bureaucracy
Partnering	Zero stakeholder dissatisfaction
Information Architecture	Zero lost information
Culture of Improvement	Zero wasted creativity
Lean Production	Zero non-value added work
Lean Equipment Management	Zero failures, zero defects
Lean Engineering	Zero lost opportunity

CSF – “broad picture”

- **Plan** (remember cost of quality)
- **Manage/monitor** (can't monitor enough – but be smart about it – critical path and 80/20 rule)
- **Re-plan**
- **Evaluate** (learn, change, develop)