



Applying Business Models to Experiential Education

Northwest Pharmacy Experiential Consortium (NWPEC)

University of Washington: Jennifer Danielson, Stanley Weber
 Oregon State University: Juancho Ramirez
 University of Wyoming: Janelle Krueger, Cara Harshberger
 Washington State University: Luke Rice
 Pacific University of Oregon: Lindsay Christensen
 University of Montana: Gayle Hudgins

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Introduction

Northwest Pharmacy Experiential Consortium (NWPEC)

- Includes PEP directors from: Idaho, Oregon, Montana, Washington, and Wyoming
- Represents 7 schools of pharmacy
- Mission: promote outstanding pharmacy experiential education for our students and preceptors by cultivating relationships among colleges and schools in NW region
- Goal: improve collaboration and scholarly activity related to professional practice experiential education

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Learning Objectives

- Distinguish methods for determining solvency (site abundance and availability) for an experiential program.
- Distinguish methods for determining efficiency for an experiential program.
- Distinguish methods for determining value (return on investment) in experiential education.
- Relate benefits and challenges of financial and comparative analysis in experiential education.

Overview

- Highlight advantages to examining the “business” of experiential education (EE)
- Relate business analysis and financial planning methods to EE
- Discuss examples of how to apply these principles
- Break out/discussion



How do you know if...

- ...you are better off than the year before?
- ...your investments in time and resources have paid off?
- ...your experiential program is operating efficiently?
- ...you should change the focus of our efforts from year to year?
- ...the structure of your experiential program is adequate?

Business Analysis

Before you determine where you are going, you need to figure out where you are.

- Examines your operations in financial terms
- Potential advantages
 - Uncovers information about your program
 - Identifies wasted time and resources
 - Reveals opportunities
 - Assists you to justify changes
 - Facilitates benchmarking

Financial Planning

Set goals so you know when you get there.

- Sets financial goals that support your educational objectives and mission.
- Potential Advantages:
 - Identifies realistic and achievable goals
 - Measures achievement in tangible terms
 - Arms you with relevant data for administrators

Business Analysis Methods

- Solvency
 - Measures a company's ability to meet long-term obligations (e.g. how likely a company is to default on its debt)
 - Business terms: liquidity, current ratio, acid-test, solvency ratio
- Efficiency
 - Measures how well a unit is accomplishing its mandates with the tools it has been given (e.g. how is it using its available capital)
 - Business terms: Inventory turnover ratio, net working capital turnover
- Profitability
 - Measures ability to generate revenue compared to expenses and costs (e.g. the proverbial "bottom line" or "breaking even")
 - Business terms: return on investment, profit margin, book value

Business Analysis for EE

Capacity

- Measuring ability to meet placement needs for professional practice experiences based on student enrollment

Value Stream Management

- Determining how money and resources are spent in order to identify waste and make informed decisions for improvement

Value

- Defining our worth for students, school, stakeholders, and scholarship

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Capacity

Solvency in Experiential Education

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Measures of Capacity

Solvency in Business	Capacity in EE
<p>Current Ratio =</p> $\frac{\text{current assets}}{\text{current liabilities}}$ <p>Solvency Ratio =</p> $\frac{\text{net profit (after taxes) + depreciation}}{\text{long-term + short-term liabilities}}$	<p>Capacity Ratio =</p> $\frac{\text{total availability}}{\text{placement needs + changes}}$ <p>Value Ratio ("Burn Out" Ratio) =</p> $\frac{\text{program revenue generated}}{\text{total program costs}}$

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APPE Capacity Comparative Analysis

	UIC (97-98 actual)	UW (09-10 actual)	NWPEC (09-10 mean)
Total needs	1276	783	596 (653)
Available sites	NA	417	499 (596)
Available blocks		1164	1166 (1238)
Changes	29 student (2%) 119 preceptor (9%) 27 affil. agmt (2%) 34 other (2%) 189 total (15%)	31 student (4%) 6 preceptor (<1%) 2 affil. agmt (<1%) 39 total (5%)	18 student (3%) 14 preceptor (2%) 8 affil. agmt (1%) 33 total (6%)
Total placements	1465	822	756
Capacity ratio	NA	1.5	1.85 (1.8)

Kawahara N, Cannon B, Harper-Brown D, Spunt A. AJPE 1999; Vol. 63. p. 406-409.

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APPE Core Capacity (09-10)

	Gen Med Acute Care	Ambulatory Care	Inpatient Health System	Community
Total needs	87	87	87	87
Available sites	33	154	111	267
Available blocks	155 (93)	293	313	657
Changes	5 Student (6%) 3 Preceptor (3%) 8 Total (9%)	5 Student (6%) 2 Preceptor (2%) 7 Total (8%)	8 Student (9%) 1 Preceptor (1%) 9 Total (10%)	6 Student (7%) 0 Preceptor (0%) 6 Total (7%)
Total Placements	118 (95)	195	215	158
Capacity Ratio	1.3 (0.98)	3.4	3.6	7.6

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Community IPPE (PY1) Capacity

	Year 1 (09-10 actual)	Year 2 (10-11 YTD)	Year 3 (11-12 goal)
Total needs	86	82	86
Total availability	~86	119	140
Changes	5 student (6%) 2 preceptor (2%) 7 total (8%)	3 student (10%) 3 preceptor (3%) 12 total (13%)	4 student (5%) 3 preceptor (3%) 7 total (8%)
Total placements	93	94	93
Capacity ratio	0.92	1.29	1.5

Institutional IPPE (PY2) Capacity

	Year 1 (09-10 actual)	Year 2 (10-11 YTD)	Year 3 (11-12 goal)
Total needs	81	87	
Available sites	36	35	
Available blocks	~81	95	
Changes	0 student (0%) 0 preceptor (0%) 0 total	7 student (8%) 2 preceptor (5%) 9 total (10%)	
Total placements	81	96	
Capacity ratio	1	0.99	

Institutional IPPE (PY2) Capacity

	Year 1 (09-10 actual)	Year 2 (10-11 YTD)	Year 3 (11-12 goal)
Total needs	81	87	
Available sites	36	35	
Available blocks	~81	95	
Changes	0 student (0%) 0 preceptor (0%) 0 total	7 student (8%) 2 preceptor (5%) 9 total (10%)	
Total placements	81	96	
Capacity ratio	1	0.99	

How do you know if...

- You are efficient?
- You need more help?
- You need new equipment?
- You need to spend more or less time on a particular process?



Value Stream Management

- Management tool used commonly in manufacturing to visualize processes and manage change
- Looks at value and non-value added processes required to deliver a service
- Ties together steps, equipment, personnel and other resources
- Identifies ways to improve individual processes to improve the “big picture”

Value Stream Management

Benefits:

- Provides a tool for communication
- Visualizes simple & complex processes
- Helps you see more than waste
- Links information flow with resources
- Measures individual steps & resources needed to complete a process

Value Stream Management

Steps:

1. Map the "Current State"
2. Identify "Service Families"
3. Measure time involved in processes
4. Visualize "Future State" (e.g. make improvements)

Mapping Current State

- Use pencil and paper
- List all services* (e.g. recruiting sites, data management, site visits, scheduling, etc.)
- Highlight services that are valued by students vs. those that are not
- List steps that are necessary to deliver the service from beginning to end

*assume students receive your services

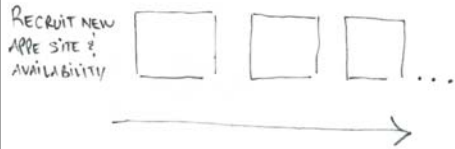
Mapping Current State

Choose a service to map:

- | | |
|---------------------------------------|-----------------------------|
| • Recruiting sites | • Training students |
| • Managing preceptor data | • Managing student data |
| • Establishing affiliation agreements | • Collecting / Grading |
| • Training preceptors | • Solving schedule problems |
| – Webcast or webinar | • Solving academic problems |
| – Live program | • Advising students |
| • Visiting sites | |
| • Building schedule | |

Mapping Current State

Service #1:



Mapping Current State

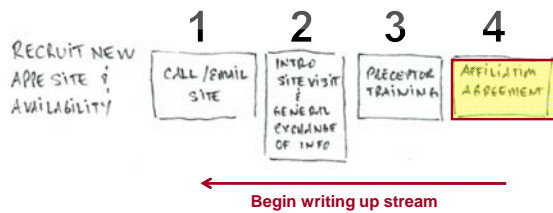
Service #1:

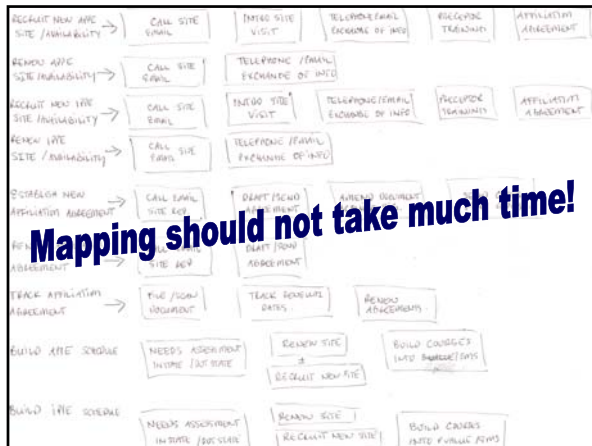
Chronologic Steps = down stream



Mapping Current State

Service #1:





Identifying Service Family

Group services together:

- Share personnel, information, equipment, or other resources
- Share a common process

	1	2	3	4	5	6
Service 1	x		x			x
Service 2		x	x	x		
Service 3	x	x	x	x	x	

Service 2 and 3 should be considered to be in the same service family.

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Measuring Time

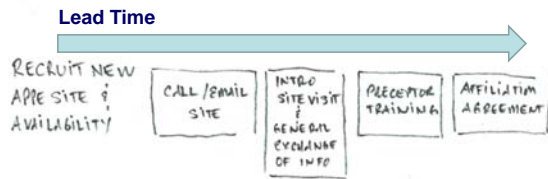
- Estimate the time it takes to complete each step.
- Identify step(s) that increase value.
- Identify personnel.
- Know available shifts and salary.
- Identify rate limiting step(s).

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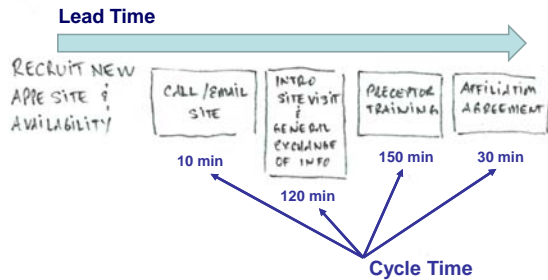
Measuring Time

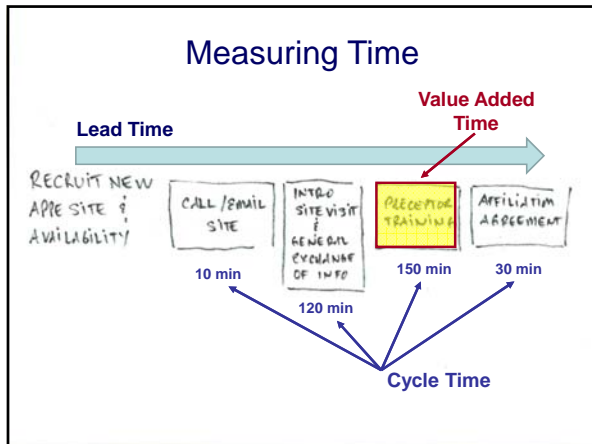


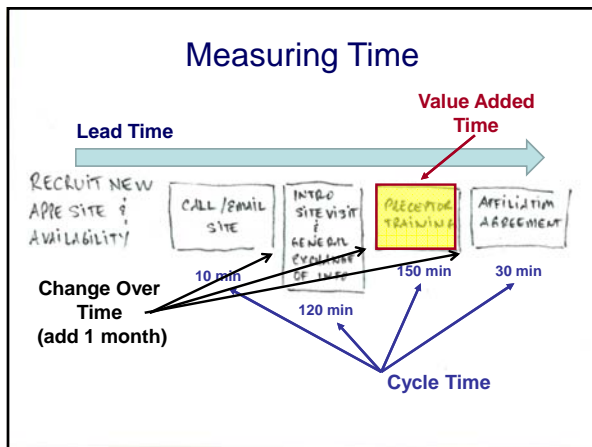
Measuring Time

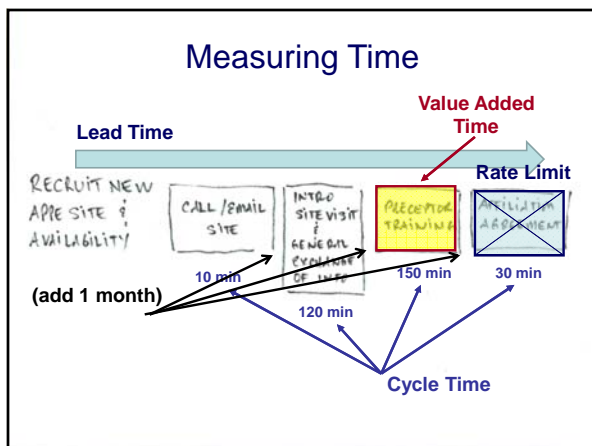


Measuring Time

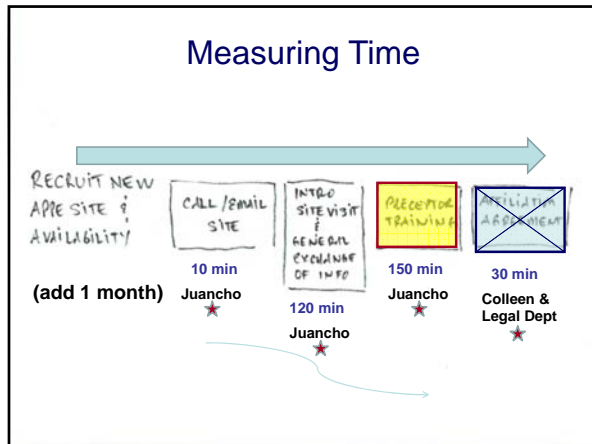








Measuring Time

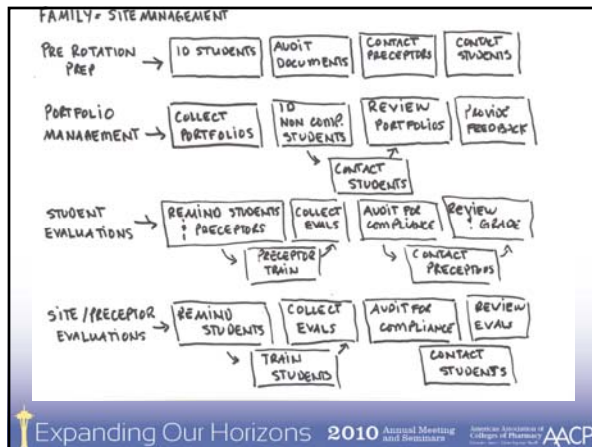


I wish that I had an extra day!



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FAMILY - SITE MANAGEMENT



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Making Improvements

- Used E*Value to automate steps
- Saved 9.9 hours every 6 weeks
- Shifted work time to value added processes to increase students' perceived value
 - To another service family
 - Create another service line or family

Conclusions

- Value stream management can be used as a tool to analyze efficiency in EE.
- Value stream management can reveal opportunities to streamline processes.
- Value stream management can produce cost savings when used optimally.

Value

Profitability in Experiential Education

Defining Value for the "4 S's"

- Students (revenue/cost per student rotation)
- School (program revenue/cost)
- Stakeholders
 - Tangible benefits
 - Non-tangible benefits
- Scholarship
 - Presentations and publications provide visibility for school
 - Promotes advancement and retention of productive faculty members

Return on Investment

Start at the program level

- | | |
|---|---|
| <ul style="list-style-type: none"> • Program costs <ul style="list-style-type: none"> – Faculty salary & benefits – Staff salary & benefits – Equipment and materials – Operating expenses <ul style="list-style-type: none"> • Rent/fees | <ul style="list-style-type: none"> • Program revenue <ul style="list-style-type: none"> – Tuition – Fees – Other revenue |
|---|---|

Return on Investment (ROI) = Revenue - Costs

Value Ratio ("Burn Out" Ratio) = $\frac{\text{program revenue generated}}{\text{program costs incurred}}$

Cost vs. Benefits: Preceptor Development

Rural Established	Urban Established
<ul style="list-style-type: none"> •Programming (32%) <ul style="list-style-type: none"> -Faculty prep time -Faculty present time -Live CE -Faculty travel •Site visits (61%) •Other fees/resources (7%) 	<ul style="list-style-type: none"> •Programming (67%) <ul style="list-style-type: none"> -Faculty prep time -Faculty present time -Live CE -Web online CE -Faculty travel •Site visits (25%) •Other fees/resources (8%)
Total Cost 2008-2010	Total Cost 2008-2010
\$33,550	\$42,100
(\$161 per student)	(\$122 per student)

What value (revenue or benefit) was generated?

Cost vs. Benefits of Preceptor Development Stakeholder: Student

Costs	Benefits
<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Tuition/Fees • Intangible (Indirect) <ul style="list-style-type: none"> - None? 	<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Availability of sites - More rotation choices - Networking with preceptors for career development • Intangible (Indirect) <ul style="list-style-type: none"> - Meeting student needs - Enhanced learning - Knowledgeable/current preceptors - Mentorship - Quality of experience

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Cost vs. Benefits of Preceptor Development Stakeholder: School

Costs	Benefits
<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Time/Salary <ul style="list-style-type: none"> • Including auxiliary staff - Technology - Travel • Intangible (Indirect) <ul style="list-style-type: none"> - Time away from other value-added activities (e.g. scholarship, student advising) 	<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Meet ACPE guidelines - Preceptor continuity - Meet Board of Pharmacy regulations (some states) - Scholarship opportunities • Intangible (Indirect) <ul style="list-style-type: none"> - Builds confident, competent preceptors - Improves skills of preceptors - Builds relationships - Quality assurance - Increases School visibility

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Cost vs. Benefits of Preceptor Development Stakeholder: Preceptor

Costs	Benefits
<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Time - Travel - Money (fees, coverage cost) • Intangible (Indirect) <ul style="list-style-type: none"> - Time away from regular duties - Time away from personal responsibilities 	<ul style="list-style-type: none"> • Tangible (Direct) <ul style="list-style-type: none"> - Non-monetary compensation (e.g. CE, library resources, opportunities for further involvement) - Monetary compensation - Recognized status at University (i.e. adjunct clinical faculty) - Opportunities to build CV • Intangible (Indirect) <ul style="list-style-type: none"> - Builds confident, competent preceptors - Improves preceptor skills and knowledge - Networking

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Conclusions

- Defining value in financial terms can yield useful information.
- Return on investment calculations and cost vs. benefit analysis can be useful in determining value of EE.
- Combining ROI calculations with other business analysis methods (ie. capacity and value stream management) can help you make informed decisions for budgeting purposes.

Break-out Discussion

How would you apply these methods at your institution?

Where will you start?

Wrap-Up

Here's how we found these methods to be useful to us.
