Curriculum Design in Physical Therapist Assistant Education

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Objectives

• Understand the expectations of a sound curriculum in PTA education from development through assessment.
• Compare various curriculum models
• Establish curricular assessment guidelines
• Implement three strategies to improve your current curriculum.
What is Curriculum?

• By definition: 1: the courses offered by an educational institution. 2: a set of courses constituting an area of specialization.¹

• In thought, a curriculum is more than just courses taught. It is:
  – A way for teachers to help learners grow in their field of study.
  – A way to communicate.
  – A description of a structured series of learning activities and outcomes.
  – A way to promote change in an area of study.

Importance for PTA Educators

• Sections 6 and 7 of CAPTE standards are related to the curriculum.
• More than meeting the technical components (it includes faculty development, resources, assessment, student activities, etc...)
• How do we prepare PTA students for entry-level practice?
• Our belief: When done well and with a commitment to continually evaluate and improve/evolve, can lead to improved job satisfaction and student performance.
Session Outline

- Curriculum language (design models, learning theories, objective writing, etc...)
- CAPTE standards and required elements
- Sequencing and threading a curriculum
- Curricular assessment
Curriculum Design Models²

(CAPTE Standard 6C)

<table>
<thead>
<tr>
<th>Models from CAPTE</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional (45.04% of PTA programs)</td>
<td>the curriculum begins with basic science, followed by clinical science and then by physical therapy science</td>
</tr>
<tr>
<td>Modified Problem-based (7.08% of PTA programs)</td>
<td>the curriculum uses the problem-based model in the later stages, but the early courses (primarily basic sciences) are presented in the more traditional format of lecture and laboratory</td>
</tr>
<tr>
<td>Systems-based (4.53% of PTA programs)</td>
<td>the curriculum is built around physiological systems (musculoskeletal, neuromuscular, cardiopulmonary, etc.)</td>
</tr>
<tr>
<td>Case-based (0.28% of PTA programs)</td>
<td>the curriculum utilizes patient cases as unifying themes throughout the curriculum</td>
</tr>
<tr>
<td>Guide-based (0.57% of PTA programs)</td>
<td>the curriculum is built around the disability model, the patient management model, and the preferred practice patterns included in the Guide to Physical Therapist Practice</td>
</tr>
<tr>
<td>Problem-based (0.3% of PTA programs)</td>
<td>the entire curriculum (including basic and clinical science content) is built around patient problems that are the focus for student-centered learning through the tutorial process and independent activities</td>
</tr>
<tr>
<td>Hybrid (42.21% of PTA programs)</td>
<td>the curriculum is designed as some combination of the above</td>
</tr>
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</table>

Key Curricular Development Components

- **Module by:** Victoria S. Kaprielian, M.D.³

- **Addresses curriculum purpose, parts and design process**
Needs Assessment/Philosophy

• Why are you doing what you are doing in your current curriculum model?
• What needs to be changed or updated?

*Take 5 minutes to answer these two questions...*

Goals and Objectives

• What are the goals of your institution and your program? (CAPTE standards 1A and B)⁴
• Objectives for each course, each lecture, each lab, each assignment are needed (CAPTE standards 6F)
Creating meaningful objectives

- Bloom’s Domains of Learning, Taxonomy
- Expectation that students go through levels in each course, NOT from PTA 101 (remembering) to PTA 401 (creating)

Bloom’s Domains of Learning

- **Cognitive**: The cognitive domain involves knowledge and the development of intellectual skills
- **Psychomotor**: The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas.
- **Affective**: The affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes.
Learning Theories

<table>
<thead>
<tr>
<th>Learning Theory</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviorism</td>
<td>Operates on principle of “stimulus-response”. All behavior caused by external stimuli.</td>
</tr>
<tr>
<td>Cognitivism</td>
<td>The mind should be opened up and understood and that the learner is an information processor</td>
</tr>
<tr>
<td>Constructivism</td>
<td>Learning is an active and constructive process</td>
</tr>
<tr>
<td>Design-based Research Methods</td>
<td>Attempts to bridge theory and practice in education</td>
</tr>
<tr>
<td>Humanism</td>
<td>Learning is viewed as a personal act to fulfill ones potential</td>
</tr>
</tbody>
</table>
Learning Styles\textsuperscript{7,8}

- Print - refers to seeing printed or written words.
- Aural - refers to listening.
- Haptic - refers to the sense of touch or grasp.
- Interactive - refers to verbalization.
- Kinesthetic - refers to whole body movement.
- Olfactory - refers to sense of smell and taste.
- Visual - refers to seeing visual depictions such as pictures and graphs.

Instructional Strategies

- Our preferred teaching style often parallels our preferred method of learning
  - Why might that be problematic?

- CAPTE standards expect variety in educational opportunities, methodology, activities (standard 6G)

\textit{Take 5 minutes to list 5 activities you use regularly in a given class. Which learning domain(s) do they address? Do they reflect one particular learning theory? Do they take varying learning styles into consideration?}
Curriculum Evaluation Strategies

• Student evaluations, course assessments, faculty assessment, advisory board feedback, clinical education feedback, etc..
• Action steps, a plan for the future
• What are 2 items you use to evaluate your curriculum? How do you help meet the needs of different types of learners?
Your Curriculum

• Take 5 minutes to personally recap:
  – What curriculum model you use and why does your PTA department uses that model?
  – What changes/updates did you identify?
  – What student activities are you already using in the classroom and how do you reach multiple types of learners?
  – What are some of the ways you evaluate your curriculum?

CAPTE Standards and Required Elements
Standards for PTA Programs
(effective January 2016)

- Standard 1: The program meets graduate achievement measures and program outcomes related to its mission and goals.
- Standard 2: The program is engaged in effective, on-going, formal, comprehensive processes for self assessment and planning for the purpose of program improvement.
- Standard 3: The institution and program operate with integrity.
- Standard 4: The program faculty are qualified for their roles and effective in carrying out their responsibilities.
- Standard 5: The program recruits, admits and graduates students consistent with the missions and goals of the institution and the program and consistent with societal needs for physical therapy services for a diverse population.
- Standard 6: The program has a comprehensive curriculum plan
- Standard 7: The curriculum includes content, learning experiences, and student testing and evaluation processes designed to prepare students to achieve educational outcomes required for initial practice in physical therapy and for lifelong learning necessary for functioning within an ever-changing health care environment.
- Standard 8: The program resources are sufficient to meet the current and projected needs of the program.

Standard 1: The program meets graduate achievement measures and program outcomes related to its mission and goals.

- 1A: The mission of the program is written and compatible with the mission of the institution, with the unit(s) in which the program resides, and with contemporary preparation of physical therapist assistants.

- 1B: The program has documented goals that are based on its mission, that reflect contemporary physical therapy education and practice, and that lead to expected program outcomes.

- 1C: The program meets required student achievement measures and its mission and goals as demonstrated by actual program outcomes.

_Is this true for your institution and your program?_
Standard 2: The program is engaged in effective, on-going, formal, comprehensive processes for self assessment and planning for the purpose of program improvement.

• 2A: The program has documented and implemented on-going, formal and comprehensive processes that are designed to determine program effectiveness and used to foster program improvement.

• 2B: For each of the following, the program provides an analysis of relevant data and identifies needed program change(s) with timelines for implementation and reassessment:
  – Admissions
  – Enrollment
  – Faculty
  – Resources (physical, financial, etc.)
  – Policies and procedures (program and institutional)

• 2C: Specifics of written assessment plan and data collection processes related to:
  – Curriculum as a whole
  – Individual courses
  – Clinical education
  – Changing roles of PTAs, dynamics of HC systems

• 2D: formal program short and long term planning/development processes
Standard 6: The program has a comprehensive curriculum plan

- 6A: Relationship to contemporary practice
- 6B: General ed/basic science curriculum
- 6C: Curricular model
- 6D: Organization/sequencing of courses, learning experiences, clinicals
- 6E: Syllabi
- 6F: Learning objectives
- 6G: Instructional methods
- 6H: Tests, measures and evaluation processes to determine achievement of objectives
- 6I (1-8): Distance education courses (<50% F2F contact) and programs ≥
- 6J (1-5): Clinical education
- 6K: Program length
- 6L: Degree awarded

Standard 7: The curriculum includes content, learning experiences, and student testing and evaluation processes designed to prepare students to achieve educational outcomes required for initial practice in physical therapy and for lifelong learning necessary for functioning within an ever-changing health care environment.

- 7A: General education component
- 7B: Physiological systems, medical and surgical conditions
- 7C: Technical component
Standard 7: The curriculum includes content, learning experiences, and student testing and evaluation processes designed to prepare students to achieve educational outcomes required for initial practice in physical therapy and for lifelong learning necessary for functioning within an ever-changing health care environment.

- 7D: Specific categories of competencies that courses must address:
  - Ethics, Values and Responsibilities (7D1-14)
  - Patient/Client Management (7D15-16)
  - Plan of Care (7D17-22)
  - Intervention (7D23a-i)
  - Tests and Measures (7D24a-n – 7D26)
  - Participation in Health Care Environment (7D27-29)
  - Practice Management (7D30-31)

Standards 6 and 7: Questions

*Considering your own curriculum and the required elements for standards 6 and 7, where you feel like some immediate updating could happen?*

*What led you to make this decision?*
Standard 8: The program resources are sufficient to meet the current and projected needs of the program.

- 8A: faculty
- 8B: administrative help
- 8C: financial
- 8D: space and equipment
- 8E: library system
- 8F: clinical sites
- 8G: clinical contracts
- 8H: Academic support services

*What resources does your program have to meet the needs of your students, faculty and curriculum? Are there resources your program lacks?*

Sequencing and Threading a Curriculum
Where to start?

• Create a grid of with your PTA program courses and then your program or institutional goals
• Create charts or notes of content areas in each course and look to see where there is overlap.
• Where there is overlap, can you focus on further development?
• Where there is no threading, which courses would lend themselves to add material?

PTA Learning Outcomes by Program Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Demonstrate effective communication</th>
<th>Demonstrate critical thinking to make educated decisions</th>
<th>Demonstrate proficient use of technologies</th>
<th>Demonstrate the ability to respectfully interact within a diverse society</th>
<th>Demonstrate professional behaviors</th>
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<tbody>
<tr>
<td>BI 211</td>
<td>Anatomy</td>
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<td>BI 213</td>
<td>Physiology</td>
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<td>EN 101</td>
<td>English Composition I</td>
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<td>HC 102</td>
<td>Health Care Communications</td>
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<td>HC 215</td>
<td>Issues in Health Care</td>
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<td>MA 120</td>
<td>College Algebra</td>
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<td>PT 101</td>
<td>Introduction to Psychology</td>
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<td>PTA 101</td>
<td>Introduction to Physical Therapy</td>
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<td>PTA 103</td>
<td>Documentation for the Physical Therapist Assistant</td>
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<td>PTA 105</td>
<td>Functional Anatomy for the Physical Therapist Assistant</td>
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<td>PTA 110</td>
<td>Basic Skills in Physical Therapy</td>
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<td>PTA 115</td>
<td>Therapeutic Exercise I</td>
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<tr>
<td>PTA 120</td>
<td>Therapeutic Modalities I</td>
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<tr>
<td>PTA 125</td>
<td>Clinical Practicum I</td>
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<td>PTA 205</td>
<td>Pathophysiology</td>
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<td>PTA 210</td>
<td>Therapeutic Modalities II</td>
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<td>Professional Issues Seminar</td>
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<td>PTA 215</td>
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<td>PTA 220</td>
<td>Clinical Practicum II</td>
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<td>PTA 230</td>
<td>Advanced Procedures</td>
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<td>PTA 240</td>
<td>Clinical Practicum III</td>
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<td>PTA 245</td>
<td>Clinical Practicum IV</td>
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Items to include when thinking about making a curricular change

Curriculum Changes for ________PTA________ (Program)
Curricular Change Presented Date: __ October 10, 2013 ______ Effective Date: ___ August 2014 ___

Rationale: Clinical Instructor Information and Student Focus Group Information, as well as, student feedback on PTA 101 and PTA 103 course evaluations.

Process for making the change: Through the registrar’s office to reassign the course number.

Data Gathered: Clinical Instructor feedback from site visits with ACCE’s have stressed the importance of documentation skills. Faculty meetings and discussion, faculty team teaching discussions, student feedback on course evaluations, and student focus group discussions have all discussed that less time is required or needed for the Intro to PT course and more time is needed in the Documentation course. With electronic health records, the documentation course has added more content and needs the time to present the content.

Name Change: n/a

Outline of Changes to Curriculum: no change in sequence, course numbers will be changed, and total course credit hours will remain the same, but course credit hours per class will change, total workload hours will decrease by 2 TLU’s, and have been discussed with faculty.

Other Departments Involved in Curricular Changes

• Should also include but not limited to:

  • Registrar:
    – Prerequisites or co-requisites
    – Will course number need to change?
    – Graded or Pass/No Pass
    – Required or elective (may have financial aid implications)
    – What type of courses are they?
      • Support Courses: These courses are identified by the student’s major area of study and are in direct support of the student’s major courses.
      • Major Courses: These courses are taken to fulfill requirements for a specific area of study or profession.

  • Dean/Curriculum Committee
    – As required by your institution

  • Admissions / Marketing: Promotional materials and application updates
    Additional training: updates in College catalog and webpage

  • Financial Aid:
    – Is this a new program or curricular changes to an existing program?
    – Will the name of the program change (identify old/new)?
    – What is the length of entire program (years, months, semesters)?
    – Total number of credit hours?
    – Term of delivery (15 weeks/6 weeks)
    – Will there be a different tuition rate?
Group Activity

• Take 3 courses in your program and match them to a program/institutional goal that they are meeting.
• Take those same 3 courses and think about their content.
  – How do they meet your needs to develop your students and to thread material through your curriculum?

Documentation of Curriculum Assessment: Closing the Loop
Data Collection vs. Data Utilization

- Is your data collection providing you with the information that you need?
- Is the data you are collecting helpful in making decisions? Is there other data you should be collecting?
- What resources do you have in place that can help you with data collection?
- What action steps need to be taken from your outcomes? How will you know when change is needed?

- How are you documenting your assessment processes?

CAPTE Assessment Grid Model

<table>
<thead>
<tr>
<th>Standard/Element</th>
<th>Measurable Goal / Outcome Statement With Threshold</th>
<th>Persons Responsible Individual(s) within the program or institution who carry out the programmatic assessment activity or who are responsible for making sure the assessment activity is carried out</th>
<th>Timeline How often assessment activities are carried out for the individual elements of the program assessment process</th>
<th>Data Collection Methods / Sources of Information Used in Data Collection</th>
<th>Data Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTE Ex</td>
<td></td>
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</tr>
<tr>
<td>CAPTE Standards/</td>
<td>Clarkson Objectives</td>
<td>Threshold</td>
<td>Outcomes from Data Collected</td>
<td>Action Plan for Program</td>
<td>Program Enhancement</td>
</tr>
<tr>
<td>Element</td>
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<tr>
<td>Clarkson College Ex</td>
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</table>
Group Activity

• What areas of assessment are hardest for your program?
• Which area is most difficult to measure in relationship to your curriculum?
• What is one thing you have learned from this session that will help you in curricular design?

Building and Assessing Curriculum

• Start with the end in mind: What do you want out of your curriculum?
• Use the CAPTE standards, elements and grid.
• Remember your institutional/program goals that are already established.
• Sequencing of courses and threading of content helps.
• Feedback, role modeling, meaningful data and activities, outcomes, and action steps all help the assessment process.
• Normative Model (2007) may be helpful for additional information.
Conclusion

• A curriculum is never done
• Curriculum design is a continually process of improvement
• Curriculums evolve and change with program and institutional goal changes, practice changes, healthcare system changes, accreditation, etc...

Questions

• Thank you for your time.
• Please feel free to contact us at:
  neb@clarksoncollege.edu
  hmclynch@stkate.edu
References

2. CAPTE aggregate PTA program data. Retrieved from http://www.capteonline.org/AggregateProgramData/
4. CAPTE PTA Standards and Required Elements. Retrieved from http://www.capteonline.org/Faculty/AccreditedPrograms/

Additional Resources

- Clarkson College PTA Program Examples
- A Normative Model of Physical Therapist Assistant Education version 2007: APTA.
- Course Objectives and Outcomes Form (example: http://ptaaccreditation.sf.edu/)