Clinical Education 2.0
Embracing Technology
Enhancing Therapy
Engaging Teaching and Learning

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Technology
• **Useful arts**
  – Skills and methods of practical subjects, e.g., manufacture and craftsmanship

• **Electronic and information technology**
  – Information technology and any equipment or interconnected system or subsystem of equipment used in the creation, conversion, or duplication of data or information
  - Telecommunications products, World Wide Web sites, multimedia, and office equipment such as copiers and fax machines

Social Media
• Media that can be archived and shared on a social network
  – Social networks:
    • Internet-based service permitting users to create a profile
    • Permit users to build lists of other users with whom they share a social connection
    • Permit users to view and navigate other user lists
    • Facilitate social constructivism
  - Collaboration on a common project among individuals separated in time and space

Electronic Technology vs. Social Media

**Electronic Technology**
• Teacher-centered, or content-centered
• Top-down delivery mode
• Isolation of learners
• Examples:
  – Videos
  – Classroom management software, e.g., Blackboard™
  – Presentation software, e.g., PowerPoint™

**Social Media**
• Participatory web
• Social construction of information
• Community of learners
• Examples:
  – Wikis
  – Blogs
  – Social bookmarking

Web 1.0 vs. Web 2.0

State of Technology in Physical Therapy Clinical Education

“I didn’t find many articles that address the use of technology in the clinical setting when mentoring students for professional programs.”
Purpose

• The purpose of this presentation is to propose technology opportunities for use throughout clinical education learning experiences that are designed to enhance teaching and engage learning and improve both student learning and practice outcomes.

Objectives

• At the conclusion of this presentation, participants will:
  • Differentiate traditional teaching methods from teaching that employs social media strategies.
  • Formulate a minimum of two (2) physical therapy practice management goals for integration into clinical teaching and learning.
  • Design, or re-design clinical education offerings to include contemporary teaching strategies and social media.
  • Craft a scaffolding solution for a clinical education situation that requires the learner to assimilate information gathered from a variety of activities and technology resources.

Clinical Education Experience

I. Clinical site—clinical education program development
II. Clinical site and Academic program partnerships
III. Getting to know the student
IV. Preparing for the student
V. The clinical education experience
VI. Evaluating the clinical teaching/learning experience

Why Develop a Clinical Education Program?

– Serve and promote the physical therapy profession (Professional duty)
– Enhance clinical practice with contemporary evidence and state-of-the-art interventions (Excellence)
– Provide additional offerings to patients/clients (Accountability; Altruism; Integrity)
– Continuing professional development and/or continuing education (Excellence; Professional Duty)
– Practice evaluation (Accountability, Excellence)

Why is it important to you to develop a clinical education program?

Continued . . .
– Establish relationship with one, or more universities
– Implement a research agenda
– Increase productivity
– Motivate employees
. . . .
Clinical Site-Clinical Education Program Development

- Practice goals drive clinical education
  - Formulate the practice philosophy related to clinical education
  - Creates student offerings
- Clinic education activities are student-centered
  - Curriculum-specific
  - Establish context for application and practice

Technology Application: Student Webpage

Clinic Benefits
- Administratively efficient
  - Responsibility for knowledge acquisition lies with the student
- Prioritizes clinic practice development
- Marketing

Student Benefits
- Valuation
- Identification with clinic and clinic development
- Provides basis for initiating learning

Example: [http://www.grmedcenter.com/support-education-classes/student/intern-orientation](http://www.grmedcenter.com/support-education-classes/student/intern-orientation)

Student Orientation: Technology Applications Summary

<table>
<thead>
<tr>
<th>Orientation Topic</th>
<th>Technology Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome Message</td>
<td>Podcast prepared by Clinic Director Facebook/LinkedIn Announcement</td>
</tr>
<tr>
<td>Orientation</td>
<td>Virtual Tour</td>
</tr>
<tr>
<td>Student Data Management</td>
<td>Photo/Biography; Link to LinkedIn</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.linkedin.com/">http://www.linkedin.com/</a></td>
</tr>
<tr>
<td>Program Goals and Objectives</td>
<td>Blog Site</td>
</tr>
<tr>
<td></td>
<td>Google Blogger: <a href="http://www.blogger.com">http://www.blogger.com</a></td>
</tr>
<tr>
<td></td>
<td>WordPress: <a href="http://www.wordpress.com">http://www.wordpress.com</a></td>
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Clinic Education: A Partnership

Consult Academic Program

- Check academic program website
- Check regional consortium website
Academic Program Resources

- Academic program in collaboration with the clinic site establishes boundaries for clinic education teaching/learning strategies
- Identify contact person(s)
- Identify technology resources used by the program supporting clinical education
- Consider a blog site for sharing among other clinical faculty working with students from the same cohort

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Academic Program: Technology Resources Summary

<table>
<thead>
<tr>
<th>Academic Program Content</th>
<th>Technology Application</th>
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<tbody>
<tr>
<td>Program Contact</td>
<td>Academic Program Website</td>
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<tr>
<td>Curriculum Content</td>
<td>Academic Program Website</td>
</tr>
<tr>
<td>Clinical Education Expectations</td>
<td>Academic Program Website</td>
</tr>
<tr>
<td>Clinical Instructor Development</td>
<td>Clinic Education Blog</td>
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Academic Program Content

1. Program Contact
2. Curriculum Content
3. Clinical Education Expectations
4. Clinical Instructor Development

Technology Application

- Academic Program Website
- Clinic Education Blog

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Section III

GETTING TO KNOW THE STUDENT

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Meet Student Prior to Start of Clinic Experience

- Exchange contact information via email
- Schedule a virtual meeting, e.g., chat
  - Google Hangouts: http://www.google.com/hangouts/

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Outcomes of Virtual Meeting

- Establish learning climate
  - Active learning
  - Engagement
  - Reciprocation
- Exchange clinical education goals
  - Clinic program development
  - Student development
  - Seek access to:
    - e-portfolio
    - Facebook and/or LinkedIn

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Determine Level of Student Learning

Diagram showing pedagogical strategy used in clinical education, illustrating different teaching perspectives and technologies.
Getting to Know the Student: Technology Strategies Summary

<table>
<thead>
<tr>
<th>Introduction Task</th>
<th>Strategy/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Clinic: Development and Student Development Goals</td>
<td>E-Portfolio: <a href="http://www.sites.google.com">http://www.sites.google.com</a></td>
</tr>
<tr>
<td>Share Teaching Learning Resources</td>
<td>Kolb Learning Styles Inventory: <a href="http://www.learning-styles-online.com/">http://www.learning-styles-online.com/</a></td>
</tr>
</tbody>
</table>

Section IV

PREPARING FOR THE STUDENT

Clinic Sites Host Students

- Clinical Agreement is ratified by the clinic and the academic institution, not the clinical instructor and student.
- Establish student calendar
  - Link calendar with staff
  - Create reminders for student assignments to staff
  - Add calendar to e-portfolio, or blog site
- Create and prioritize practice development
  - Update protocol used for a given diagnosis
  - Documentation assessment/audit
  - Compare outcomes and patient/client response to treatment across practitioners

Build Collection of Teaching Resources

- Clinical cases
- Clinical procedure videos
- Clinical applications used for patient/client care
- Clinical decision tools
- Optional practice opportunities

Technology Tools: Clinical Cases

<table>
<thead>
<tr>
<th>Teaching Strategy</th>
<th>Technology Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Cases</td>
<td>University websites, e.g.: <a href="http://content.dn.carolinas.edu/cdm/findingpages/collection/pthesis">http://content.dn.carolinas.edu/cdm/findingpages/collection/pthesis</a></td>
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Technology Tools: Clinical Procedure Videos

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<th>Teaching Strategy</th>
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Technology Tools: Examination and Procedure Apps

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<th>Teaching Strategy</th>
<th>Technology Resources</th>
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</table>

Section V

THE CLINICAL EDUCATION EXPERIENCE

Clinical Education:
Not your Mother’s Buick Anymore!

New Paradigms in Classroom Education: “Flipped Classroom”

- What used to be done at home is done in school; what used to be done in school is done at home.
- Engages students
- Expands breadth and depth of learning
- Affords faculty and students more time to focus on what is important

Clinical Teaching 2.0

- Constructivism
  - Intersection of knowledge and experience
- Learning outcomes are best in a social context
- Clinical faculty serve as guides to students in the learning process to the point they can take over
  - Scaffolding

Does a paradigm shift in classroom education require a similar shift in clinical education?

IT SHOULD!
Alex: Early Clinic Experience, cont. . . .

- Alex is able to articulate to you relevant patient history interview questions
- Previously, you would have used the traditional “see-one; do-one; teach-one” approach
- Your reflections on these past experiences informs you that students in an Early Clinic Experience require 40/50 min to complete the history and subjective intake using this process

Case 1 (Alex): Early Clinic Experience

- Alex is assigned to your outpatient practice for her first fulltime clinic experience.
- Alex has completed 5 of 9 semesters in the 3-year DPT program. This summer fulltime assignment is the 6th semester.
- Clinic Outcome Expectation: Alex will develop an internal schemata for gathering and interpreting data from the initial examination.
- Alex has never performed a patient examination start to finish.

Alex: Early Clinic Experience Clinical Education 2.0

- Request that Alex create a patient history and subjective interview outline/form in her clinic blog
- Assign the following YouTube links:
  - https://www.youtube.com/watch?v=gsjKcQUsQY8
  - https://www.youtube.com/watch?v=FcwIHFj_rtM
  - (These are stored in a database you are collecting as resources for clinical education)
- Request that Alex compare what she observed in the videos with what she recorded
- Request Alex update her patient history and subjective interview outline

Alex: Early Clinic Experience Clinical Education 2.0

- Assign Alex to observe patient history and subjective interview for all new clients scheduled in the next 2-3 days
- Homework: Request that Alex compare/contrast observed patient history and subjective interviews with the data recorded in her blog
- Review and comment in her blog in the evening
- Discuss findings next morning

Alex: Early Clinic Experience Clinical Education 2.0

- Pair Alex with staff therapists scheduled to see new patients/clients in the next 2-3 days
- Assign Alex 10 min to obtain history/interview data
- Homework: Request that Alex reflect on her effectiveness and efficiency in this activity
- Review and comment in her blog in the evening; include feedback provided by the “attending” therapists
- Discuss findings next morning
**Case 2 (Dalva): Mid-Level Clinic Experience**
- Dalva is a third-year student in the 8th semester of a 9-semester DPT program
- She successfully completed 4 part-time clinic experiences and 1 fulltime clinic experience, previously
- She admits to having seen everything, but only once

**Dalva: Mid-Level Clinic Experience**
- Dalva has good organization skills
- Her patient examinations “have all the right parts”
- She struggles with interpretation of data, establishing a plan of care, and documentation

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**Dalva: Mid-Level Clinic Experience**

**Clinical Education 2.0**

**Stacking and Layering**
- Select a diagnosis commonly seen in your clinic
- Refer Dalva to Morphopedics, Physio-pedia, and CORE to review the diagnosis, relevant special tests, outcomes assessments, differential diagnoses, etc.
  - Consider giving her the morning, or the afternoon to complete this work
- Assign an output for this assignment, e.g., outline for the objective exam; decision-tree; enter output into her blog

**Dalva: Mid-Level Clinic Experience**

**Clinical Education 2.0**
- Create a week-long schedule permitting Dalva to work with all patients assigned this diagnosis scheduled during the week
- Around the patient schedule, request that Dalva review documentation for past and current clients with the same diagnosis
  - N is irrelevant, here
- Ask her to analyze the documentation using the Defensible Documentation Checklist and provide you an executive summary of the audit findings

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**Dalva: Mid-Level Clinic Experience**

**Clinical Education 2.0**
- Facilitate a differential discussion and request that Dalva record the discussion for insertion into her blog
- Review and comment in Dalva’s blog
- Update CPI
- Assign patients with this diagnosis to Dalva’s schedule for her patient/client management development

**Case 3 (Monica): Final Internship**
- Monica is assigned to your OP practice for her final internship with focus in pelvic floor dysfunction
- Monica is a second-career student. She is mature, worldly and very bright.
- Monica is confident and competent in all aspects of entry-level practice
Monica: Final Internship

- One of your practice goals is to standardize reporting of functional limitations across practitioners
- You sit with Monica to explain what you wish to accomplish and brainstorm how to approach data acquisition and synthesis
- You task Monica with the project

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Example Source</th>
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<tbody>
<tr>
<td>Literature search</td>
<td>Zotero [<a href="http://www.zotero.org/">http://www.zotero.org/</a>]</td>
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<td>Blog collection</td>
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<td>WebPT [<a href="http://www.webpt.com/blog/tag/outcome-measures">http://www.webpt.com/blog/tag/outcome-measures</a>]</td>
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<td>FOTO [<a href="http://www.welpt.com/blog/tag/outcome-measures">http://www.welpt.com/blog/tag/outcome-measures</a>]</td>
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<tr>
<td></td>
<td>Evidence in Motion [<a href="http://www.evidenceinmotion.com/">http://www.evidenceinmotion.com/</a>]</td>
</tr>
<tr>
<td></td>
<td>... And more. . . .</td>
</tr>
<tr>
<td>Section on Women’s Health</td>
<td>[<a href="http://www.womenshealthapta.org/research/outcome-measures">http://www.womenshealthapta.org/research/outcome-measures</a>]</td>
</tr>
<tr>
<td>Wiki</td>
<td>Physio_Pedia [<a href="http://www.physio-pedia.com/Low_Back_Pain_and_Pelvic_Floor_Disorders">http://www.physio-pedia.com/Low_Back_Pain_and_Pelvic_Floor_Disorders</a>]</td>
</tr>
</tbody>
</table>

Monica’s Mash-Up

Monica: Final Internship
Clinical Education 2.0

- Outcomes
  - Evidenced-based analysis of research and expert practice
  - Report of current practice, including SWOT with respect of reporting functional limitations
  - Recommendations for action—a new tool for measurement?
  - Clinical measurement case report submitted to PTJ

EVALUATING THE CLINICAL TEACHING/LEARNING EXPERIENCE

Section VI

Why Develop a Clinical Education Program?

- Serve and promote the physical therapy profession
- Enhance clinical practice with contemporary evidence and state-of-the-art interventions
- Provide additional offerings to patients/clients
- Continuing professional development and/or continuing education
- Practice evaluation
- Establish relationship with one, or more universities
- Implement a research agenda
- Increase productivity
- Motivate employees

360° Process

- Center Coordinator of Clinical Education (CCCE)
- Students
- Professional Staff/Clinical Instructors
- Administrative Staff
- Academic Faculty
- Patients/ Clients