



Clinical Education 2.0

Embracing Technology
Enhancing Therapy
Engaging Teaching and Learning

Diana G. Venskus, PT, PhD
Director of Clinical Education
Marymount University

Jason A. Craig, PT, DPhil
Professor
Marymount University

Technology

- *Useful arts*
 - Skills and methods of practical subjects, e.g., manufacture and craftsmanship
 - Wikipedia, the free encyclopedia. http://en.wikipedia.org/wiki/Useful_arts. Accessed 6/13/2013
- 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
 - Architectural and Transportation Barriers Compliance Board (<http://www.access-board.gov/et/et.html>). Accessed 6/13/2013

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

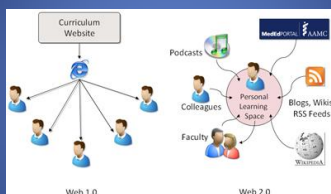


Image via https://www.aacm.org/members/jr/jr_resources/112066/viewpoint_may08.html

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.”

Baker C. Pauline Curran's Lecture 2012: Googling and testing and browsing, oh my! Monitoring and teaching in an electronic age. *Journal of Physical Therapy Education*. 2012;26(3):5-12.

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

Section I.

CLINICAL SITE-CLINICAL EDUCATION PROGRAM DEVELOPMENT

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-services/education-classes/student/intern-orientation>

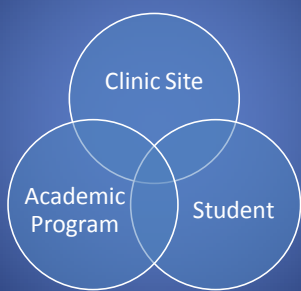
Student Orientation: Technology Applications Summary

Orientation Topic	Technology Application	
Welcome Message	Podcast prepared by Clinic Director Facebook/LinkedIn Announcement	https://www.facebook.com/ http://www.linkedin.com/
Orientation	Virtual Tour	http://www.download32.com/virtual-tour-freeware-software.html http://www.virtually-anywhere.com
Student Data Management		
Clinic Staff Profiles	Photo/Biography; Link to LinkedIn	http://www.linkedin.com/
Program Goals and Objectives	Blog Site	Google Blogger: http://www.blogger.com WordPress: http://www.wordpress.com

Section II

CLINICAL SITE AND ACADEMIC PROGRAM PARTNERSHIPS

Clinic Education: A Partnership



Consult Academic Program

- Check academic program website
 - » Example: <http://www.tnstate.edu/pt/clinicalinstructors.aspx>
 - » http://pt.umaryland.edu/clinical_education.asp
- Check regional consortium website
 - » Example: <http://www.nvnclined.org/>
 - » Example: <http://www.clinicaled.org/index.html>

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

Academic Program: Technology Resources Summary

Academic Program Content	Technology Application
Program Contact	Academic Program Website
Curriculum Content	Academic Program Website
Clinical Education Expectations	Academic Program Website
Clinical Instructor Development	Clinic Education Blog

Section III

GETTING TO KNOW THE STUDENT

Meet Student Prior to Start of Clinic Experience

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

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

Determine Level of Student Learning



Image via Nilsson M, Penbrant S, Pihannur E, Wenesstam C-G. Pedagogical strategies used in clinical medical education: an observational study. BMC Medical Education. 2010;10(1):9. doi:10.1186/1472-6920-10-9.

Getting to Know the Student: Technology Strategies Summary

Introduction Task	Strategy/Source
Meet Student	Email Skype: http://www.skype.com/en/ Google Hangouts: http://www.google.com/hangouts/
Exchange Clinic Development and Student Development Goals	E-Portfolio: http://www.sites.google.com
Share Teaching Learning Resources	Kolb Learning Styles Inventory: http://www.learning-styles-online.com/
Exchange Literature related to Clinical Teaching and Learning	Mendeley: http://www.mendeley.com/ http://www.zotero.org/ E-Portfolio: http://www.wordpress.com Journal: http://www.livejournal.com

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

Teaching Strategy	Technology Resources
Case-Based Learning	The Clinical Teacher: http://www.mrowe.co.za/blog/mobile/
Clinical Cases	Hooked on Evidence: http://www.hookedonevidence.org/searchPooled.cfm
	University websites, e.g., http://content-dm.carrollu.edu/cdm/landingpage/collection/ptthesis
	Exploring essential cases: https://itunes.apple.com/us/app/exploring-essential-cases/id541376008?mt=8
	Visible Patient: https://play.google.com/store/apps/details?id=com.ircad.VisiblePatient.full&hl=en

Technology Tools: Clinical Procedure Videos

Teaching Strategy	Technology Resources
Clinical Procedure Videos	Morphopedics: http://morphopedics.wikidot.com/
	Physiopedia: http://www.physio-pedia.com/
	YouTube: http://www.youtube.com/

Technology Tools: Examination and Procedure Apps

Teaching Strategy	Technology Resources
Clinical Examination Resources	CORE: https://itunes.apple.com/us/app/core-clinical-orthopedic-exam/id3294705207mt=8
	Mini-Clinical Evaluation Exercise: http://www.abim.org/program-directors-administrators/assessment-tools/mini-cex.aspx

Section V

THE CLINICAL EDUCATION EXPERIENCE

Clinical Education:
Not your Mother's Buick Anymore!



New Paradigms in Classroom Education: "Flipped Classroom"

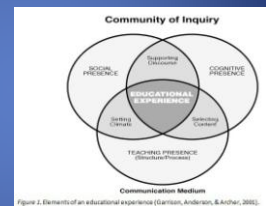
- What used to be done at home is done in school; what used to be done in school is done at home.
- Engages students
- Expands breadth and depth of learning
- Affords faculty and students more time to focus on what is important

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

IT SHOULD!

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



What does this look like?


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*, 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

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 
 - <http://www.youtube.com/watch?v=gsjKcQUsQY8>
 - http://www.youtube.com/watch?v=FcwIHFj_rtM
 - (These are stored in a dbase 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

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

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

Strategy	Example Source
Literature search	Zotero http://www.zotero.org/
Blog collection	Therapydia https://www.therapydia.com/pt_home WebPT http://www.webpt.com/blog/tag/outcome-measures FOTO http://www.webpt.com/blog/tag/outcome-measures Evidence in Motion http://www.evidenceinmotion.com/ ... And more....
Section on Women's Health	http://www.womenshealthapta.org/research/functional-outcomes-measures.cfm Listserve http://www.womenshealthapta.org/cb/ct/access/log_in.cfm?ref_url=www.womenshealthapta.org/members/listserv/index.cfm
Wiki	Physio_Pedia http://www.physio-pedia.com/Low_Back_Pain_and_Pelvic_Floor_Disorders

Monica: Final Internship
Clinical Education 2.0

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*

Section VI

EVALUATING THE CLINICAL TEACHING/LEARNING EXPERIENCE

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



Technology Resources: Clinical Education Program Evaluation

Resource	Address
Clinical Education Evaluation Survey	American Physical Therapy Association http://www.apta.org/Educators/Clinical/5Development/
Free Survey Ware	SurveyMoz http://www.surveymoz.com Survey Monkey http://www.surveymonkey.com Acrobat http://www.acrobat.com And more...

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Technology References

Clinical Education Topic	Technology Application/Strategy/Website/Apps
Orientation to Facility/Clinic/Practice	
Welcome Message(s) - Podcast prepared by Clinic Director/Facebook/LinkedIn Announcement	http://www.edtechnetwork.com/podcast_vodcasting.html http://www.facebook.com/ http://www.linkedin.com/
Orientation - Virtual Tour	http://www.download32.com/virtual-tour-freeware-software.html http://www.virtuallyanywhere.com
Student Data Management	
Clinic Staff Profiles - Photos and Biographies with links to Social Media	Google Blogger: http://www.blogger.com
Clinic Program Goals and Objectives Posted to Blog Site	WordPress: http://www.wordpress.com
Preparation for Clinical Education Experience	
Program Contact	Academic Program Website
Curriculum Content	Academic Program Website
Clinical Education Expectations	Academic Program Website
Clinical Instructor Development	Clinic Education Blog
Exchange Clinic Development and Student Development Goals	E-Portfolio: http://www.sites.google.com Kolb Learning Styles Inventory: http://www.learning-styles-online.com/
Share Teaching Learning Resources	Mendeley: http://www.mendeley.com/ http://www.zotero.org/ E-Portfolio: http://www.wordpress.com Journal: http://www.livjournal.com

Technology References, cont.

Clinical Education Topic	Technology Application/Strategy/Website/Apps
Getting to Know the Student before the Clinical Education Experience	
Virtual meeting	Skype: http://www.skype.com/en/ Google Hangouts: http://www.google.com/hangouts/ Hosted on Evidence: http://www.hostedonvidence.org/searchPooled.cfm University websites, e.g., http://content.din.carrollu.edu/cdm/landingpage/collection/patthesis Exploring essential cases: https://itunes.apple.com/us/app/exploring-essential-cases/id431750002?mt=8 Visible Patient: https://play.google.com/store/apps/details?id=com.ircad.VisiblePatient.full&hl=en
Clinical Procedure Videos	Morphopedics: http://morphopedics.wikidot.com/ Physiovideo: http://www.physiovideo.com/ YouTube: http://www.youtube.com/ CORE: https://itunes.apple.com/us/app/core-clinical-orthopedic-exam/id343705207mt=8
Clinical Examination Resources	Men: http://www.abim.org/program-directors-administrators/assessment-tools/minicex.aspx CORE: https://itunes.apple.com/us/app/core-clinical-orthopedic-exam/id343705207mt=8
Clinical Examination Resources	Men: http://www.abim.org/program-directors-administrators/assessment-tools/minicex.aspx CORE: https://itunes.apple.com/us/app/core-clinical-orthopedic-exam/id343705207mt=8
Clinical Examination Resources	Men: http://www.abim.org/program-directors-administrators/assessment-tools/minicex.aspx CORE: https://itunes.apple.com/us/app/core-clinical-orthopedic-exam/id343705207mt=8

