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Best Practices In Instructional Design/Technology For Patient/Client Education

By
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Learning Outcomes

▪ As a result of this course, participants will be able to:
  ▪ Discuss the strengths and opportunities of multimedia-based patient education for occupational therapy clients/patients/consumers.
  ▪ Identify principles of instructional design/technology that will strengthen learning among asynchronous patient education interactions.
  ▪ List characteristics of multimedia based patient education that will support the client/patient, therapist/educator, and broader organization.
Operationalized Terms

- Patient/client education
- Learning
- Instructional Design
- Health Literacy

Current Education/Training Standards for Occupational Therapists

- 2018 ACOTE Standards (Master Level) – AOTA, 2019
  - B.4.21
    - Demonstrate, evaluate, and utilize the principles of the teaching–learning process using educational methods and health literacy education approaches: A) To design activities and clinical training for persons, groups, and populations, B) To instruct and train the client, caregiver, family, significant others, and communities at the level of the audience.
  - B.6.6
    - Demonstrate an understanding and apply the principles of instructional design and teaching and learning in preparation for work in an academic setting.
Status of Patient/Client Education

- Patient/client education is an intervention
  - Manipulating/enhancing
    - Knowledge
    - Attitudes/value
    - Skills
  - Clinical hypothesis
    - If I provide _____ type of instruction, in ____ format, the client will demonstrate the ability to_______?

SAY WHAT???

- Regardless of practice area, OT's considered teaching-learning approaches core to their practice, without necessarily identifying a clear process to guide their implementation. Competency in teaching-learning was generally seen to be gained through trial and error (Greber, Ziviani & Rodger, 2011).
- The use of handouts and other traditional client education methods are not supported by evidence (DeCleene et al., 2013).
Multimedia-Based Patient Education: Strengths and Opportunities

- There is no significant difference between traditional and multimedia-based education/training - http://nosignificantdifference.org/
- Reusable with the same client or different clients
- Accessible – 508 compliant for individuals with visual/auditory-based needs or disabilities
- Preferred mode of learning with the changing generations
  - Does not replace face to face discussion and training but serves as a primer and/or to reinforce.

Access to Multimedia Based Delivery

- Smart Phone Users in America
  - 2010 = 62.6 million  20%
  - 2018 = 237.6 million  69%
  - Projected in 2022 = 270.66  72%
- Does not include tablets or personal computer access…….
Why use paper when most of the population is accessing information in a paperless format?

Client Education and Multimedia

- Clear objective/purpose of the client education/training
- Reusable
- Durable content/training needs to evidenced based and not a fad....
- High demand/volume (e.g. hip/knee precautions, developmental skills/strategies)
- General training/education topics
  - More general - more likely
  - More specific - less likely
Principles of Instructional Design

- ADDIE Model of Instructional Design
  - Analysis
  - Design
  - Develop
  - Implement
  - Evaluate

- Occupational Therapy Process
  - Occupational Profile & Analysis of Occupational Performance
  - Intervention Plan (implementation & intervention review)
  - Outcomes (selecting outcome measures & applying outcomes)

Principles of Instructional Design

- Blooms Domains of Learning
  - **Cognitive**: mental skills *(knowledge)* – knowing how to use adaptive equipment during dressing
  - **Affective**: growth in feelings or emotional areas *(attitude or self)* valuing the adaptive equipment with dressing (independence and adherence to precautions)
  - **Psychomotor**: manual or physical skills *(skills)* (demonstrating how to use adaptive equipment while adhering to precautions)
Principles of Instructional Design

- Gagne’s 9 Instructional Events
  - Preparation
    - Gain attention
    - Inform learners of objective(s)
    - Stimulate recall of prior learning
  - Instruction & Practice
    - Present the content
    - Provide “learning guidance”
    - Elicit performance (practice)
    - Provide feedback

- Assessment & Transfer
  - Assess performance
  - Enhance retention and transfer

Principles of Instructional Design

- Science of e-Learning
  - Multimedia Principle - use of words and images
  - Contiguity Principle - use of words and images provided simultaneously
  - Modality Principle - use of words should be narrated and not visual
  - Redundancy Principle - narration and images vs. narration, text and image (it’s too much!)
  - Coherence Principle - avoid unnecessary text, sounds, and graphics
  - Personalization Principle - conversation style presentation in first/second person

- Worked examples
- Practice

Clark & Mayer, (2008)
Instructional Technology For Practitioners

- Capture
  - Digital Camera
  - Computer/laptop/tablet
  - Smart Phone
- Organize/develop
  - PowerPoint/Keynote
    - Storyboards
    - Templates/blueprint
- Display/disseminate
  - Camtasia
  - Screencast-O-Matic
  - Prezi
  - YouTube

Blueprint

- Primary
  - Objective (1)
  - Content
    - Knowledge
    - Attitude/value
    - Skill
  - Assessment/test knowledge
    - Based upon the objective
- Secondary
  - Insert Individualized image or video segment unique to the client
  - Insert individualized cues стратегии for learning that worked during therapy
**Practical Implementation**

- **Example 1**
  - Teaching/training AE use with movement/position precautions after joint replacement
  - Develop multimedia demonstrating the precautions and how to use a long handled reacher, dressing stick, and sock aid
    - Use to prime prior to procedure
    - Use to reinforce during and just after therapeutic training
    - Use to train caregivers @ discharge
    - Use to follow-up

- **Example 2**
  - Splint/Orthotics - care/precautions of a wrist cock up splint for wrist cock up splint
    - Develop multimedia for general clients or specific age groups (e.g. geriatrics, adults, pediatrics)
    - Use to prime prior to splint fabrication
    - Use for the client/caregiver to refer back to or prior to follow-up

- **Example 3**
  - General developmental principles to develop/reinforce pre-writing readiness in a school district
    - Develop multimedia resource for teachers, paraprofessionals, parents, parent groups
    - Reuse as orientation to new teachers and staff
    - Reuse for parents as needed

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**Deliverables: What is on the Menu?**

- Housed on YouTube
  - https://www.youtube.com/watch?v=cP6XW8xiBm0
- Housed within a community portal for patients in a hospital system
- Housed within portal for educators/parents
  - https://www.spdstar.org/basic/online-education
- Stored on a clinic tablet or jump drive
- Emailed to key clients
Questions?

References

Resources

- Prezi
- Camtasia
- Screencast-O-Matic
- Sensory Processing Disorder University

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