Kinesiology Pro-Consult

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Project Overview

The Kinesiology Pro Consult was developed in conjunction with the Occupational Therapy department at GRU. This application was developed as a visual guide and resource for OT students and clinicians to learn and review how to accurately measure joint range of motion in clinic and for exams. Users are able to see the movement being measured in a clinical setting, highlighting goniometer placement as well as the prime muscles involved utilizing an animated 3D skeleton. Users can see the musculature and anatomy within the body that they typically would not be able to see while attending their patients.

Project Commissioner

Georgia Regents University-Ocupational Therapy

Project Creator

Georgia Regents University-Instructional Design and Development

Team

Lynsey Ekema - 3D Design, Medical Illustration, Animation
Timmy White- IOS Developer
Jason Hughes - Content Advisor
Aaron Burkhart - Interface Design

Project Brief

With the use of 3D anatomical models and video, the Kinesiology Pro-Consult allows students to take their understanding and ability to learn range of motion and patient positioning to a new level. Where a typical classroom setting only allows for limited exposure to memorized procedures and content, the Kinesiology Pro-Consult provides a means for students to interact with medically accurate examples of prime muscles and joint range of motion through surface video footage as well as subsurface anatomical structures.

Project Need

In the typical classroom and clinical setting, students can only learn and visualize flexions and range of motion through limited interaction with patients. Learning and retention are limited to what the student is able to memorize and what they are able to see during their interactions with patients.

The Kinesiology Pro Consult provides a solution to this problem by allowing students to interact with a medically accurate skeletal model, select regions to investigate and then see, not only the surface motion they would normally see dealing with patients in a classroom setting, but also the skeletal and musculature in motion underneath.

The Kinesiology Pro Consult allows students to visualize anatomy and the correct use of goniometer placement and the prime muscles involved though interactions with 3D models and video. Use of this application provides students with a greater understanding and accuracy in measuring joint of range motion and patient positioning.

This application is made available on the iPhone and iPad providing a tool that can be utilized anywhere.

User Experience

The user can interact with a 3D model of the skeleton, manipulating and then choosing an anatomical region to learn more about. Users are then given video content showing surface motion as well as the musculature and skeletal flexions underneath. Students are also provided with accurate goniometer positioning to allow them to learn how to measure joint range of motion.

Videos were created using real patients depicting accurate range of motion. Medical illustrator and 3D Model developer, Lynsey Ekema, then created musculature and skeletal models that reflected that same motion in greater detail.

IO Developer Timmy White created a menu system that allows the user to choose a region on the 3D skeletal model to learn more about. Users can rotate and zoom in on regions of the model through touch interaction.

Project Marketing

The Kinesiology Pro-Consult is being marketed to students as well as clinicians as a way to improve student learning and understanding as well as a resource to be used with patients. The project is being promoted to students on the Georgia Regents Campus as well as through the web and professional conferences such as the American Occupational Therapy association national meeting.

In the 5 months that the Kinesiology Pro Consult has been released, the application has been downloaded over 6,000 times in over 25 countries. Student response has been excellent.

Project Privacy

This project is HIPAA compliant and does not capture or use any user information or data.

EdTech

EdTech focuses on how education is changing through technology, changing the way we learn and process knowledge. What will stand out here is those that enhance the learning experience and make a lasting impression.
More Details