

Inclusion of Adults with Developmental Disabilities in the Development of Visual (Pictorial And Video) Instructions for A Physical Activity Education Intervention

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Background

Literature suggests that individuals with DD are less physically active than the general population (Draheim, 2006; Heller, Hsieh, & Rimmer, 2004; Rimmer & Yamaki, 2006; Stanish, Temple, & Frey, 2006). The physical inactivity can lead to health consequences in forms of coronary heart disease (Moss, 2009), hypertension, and diabetes mellitus (Sohler, Lubetkin, Levy, Soghomonian, & Rimmerman, 2009). As such, a health education program called "Promoting Health Through Physical Activity Knowledge And Skills"(PHPAK) was developed by Indiana University researchers, interested in employing innovative and effective instructional methods focusing on physical activity. Visual (video and pictorial) instructions were considered utilizable after a comprehensive literature review was conducted. The review showed that visual instructions have been tested and show good potential for vocational training(Mack & Thomas, 2008; Ryba, Selby, & Brown), presenting educational information(Mechling, 2008) and life skill teaching (Alberto, Cihak, & Gama, 2005) among people with DD.

This study describes and examines the process of video and pictorial material development for PHPAK. The authors included one group of individuals with DD in filmmaking and photo shooting, and another group as pilot testing participants. The rationale was that it is known in the literature "highly enjoyable activities" are the key for promoting physical activity participation people with DD (Draheim, Williams, & McCubbin, 2002), the inclusion of people with DD could contribute to the selection of highly enjoyable activities and consequently enhance the curriculum.

Objective

To describe and demonstrate the usage of videos and pictures in transmitting health concepts to individuals with developmental disabilities(DD) and to evaluate the visual instructional approach through inclusion of a focus group of adults with developmental disabilities

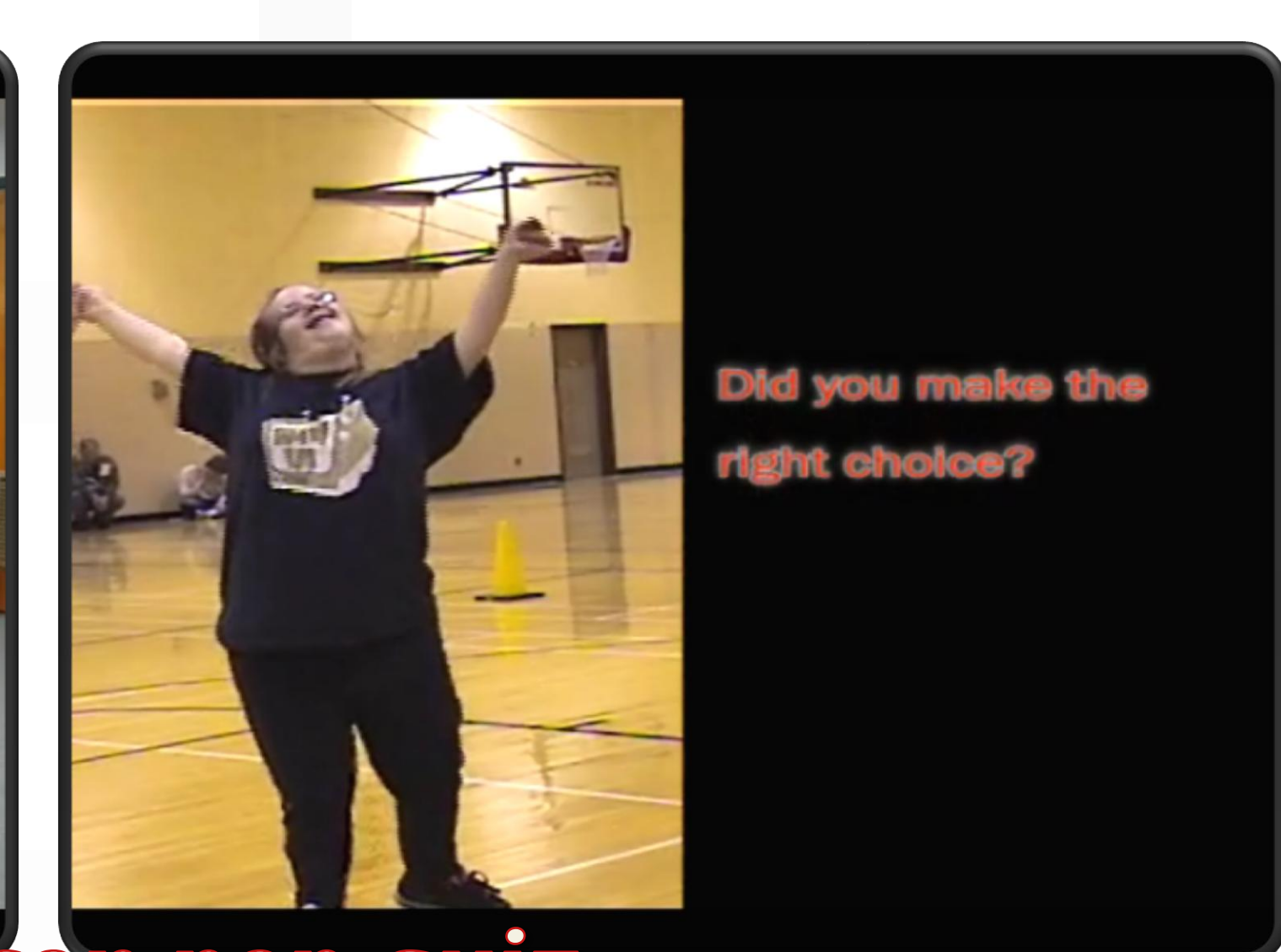
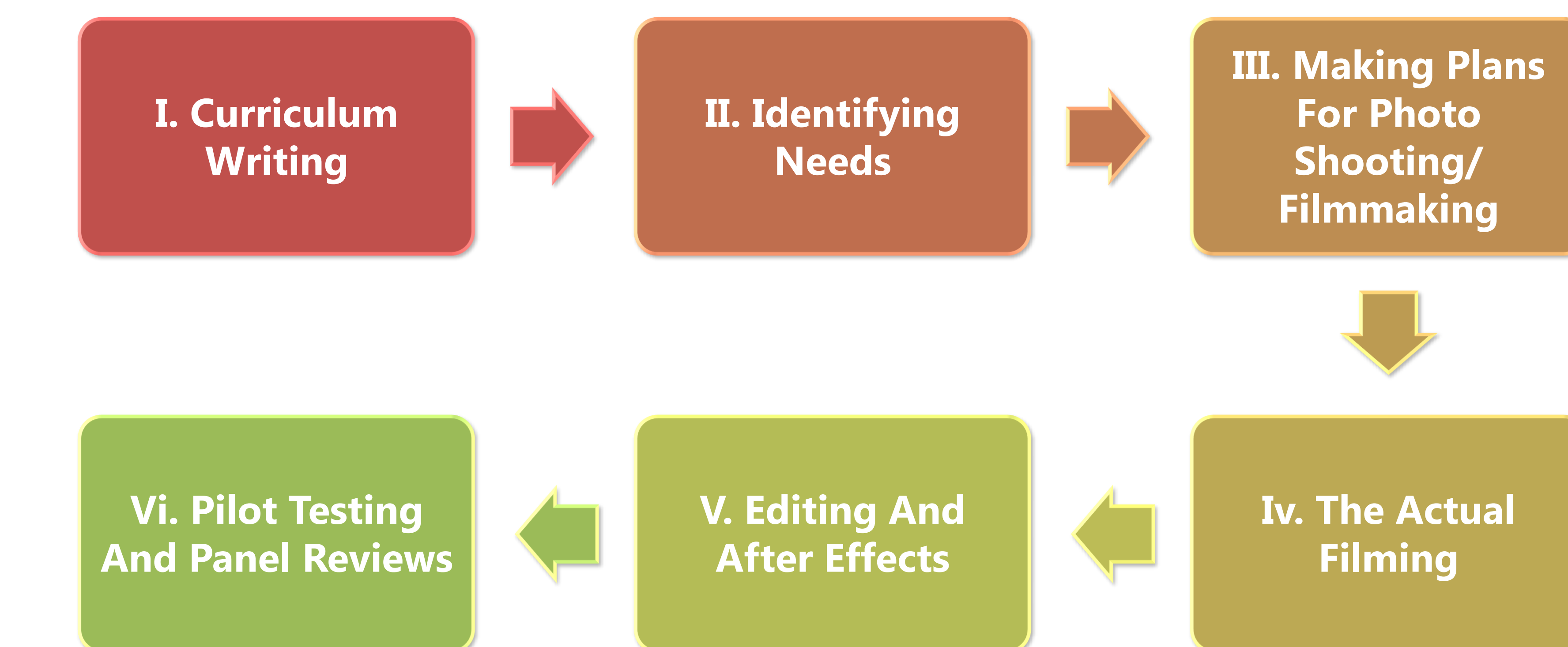
Methods

- I. Curriculum writing:** As the first phase of the project, a curriculum was written, focusing on physical activity(PA)concepts, PA recommendations, using a pedometer, benefits of PA, ways to increase PA participation and PA safety. The content was carefully compiled from the literature regarding PA and needs of people with DD. The content was then organized into eight 30-minute sessions, each with specific topics.
- II. Identifying needs (for visual instructions):** In this phase, the curriculum underwent a critical analysis, in which the authors reviewed the contents and highlighted concepts that can be visually represented or has potential to incorporate visual materials. Authors then listed all identified activities in a table for use in the next phase.



30 minutes of physical activity every day!

Invite your friends to engage in physical activity with you!



Using split-screen videos for in-lesson pop quiz.



Video demonstration of group physical activities

III. Making plans for photo shooting/filmmaking: In this phase, authors first listed time/locations that can be used to conduct the actual filming. After that, appointments were made and the proposed locations underwent a "test run" to check for adequate lighting, safe and appropriate environment and acceptable noise level. Meanwhile, activities to be filmed were categorized by types, contexts and equipment requirement. A detailed written plan was put together before the actual filming.

IV. The actual filming: Three young adults with DD (age 18-21) were recruited as models through Indiana University Adapted Physical Activity Program upon their consent/consent of legal guardian. Still pictures were taken from a consumer quality digital camera(Canon PowerShot A720 IS). Video was filmed using a standard DVD-quality Sony digital camcorder(size 720x480 at a speed of 30 frames/second) with a tripod. The photographer had adequate experience and skill to operate the equipment but was not a specialized professional.

V. Editing and after effects: Videos were edited and organized, after effects and sounds added using the software Adobe® Premiere Pro CS3. Limited changes made to the photos include size changes, cropping and contrast adjustments using Google Picasa™ version 3.1.0 for WinXP/Vista.

VI. Pilot testing and panel reviews: after polishing, the visual teaching materials are submitted to the two reviewing groups – pilot testing group and the expert panel. Evaluation sheets were used and written comments/suggestions recorded.

Results

The draft of visual instructions was approved by both groups, with a few changes made according to their comments. The developed materials were incorporated into the final PHPAK curriculum.

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