

## **A TECHNOLOGICAL APPROACH FOR PREGNANCY PREVENTION AMONG YOUTH WITH DISABILITIES**

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*There is a deficit of curricular materials developed specifically for use by educators when teaching self-respect and pregnancy prevention to students with mild intellectual disabilities. A federal grant was secured from the United States Department of Education (USDE) to develop an innovative technological strategy that would improve results of education and access to and participation in general secondary curriculum for students with disabilities. National data were collected to determine appropriate content for inclusion in an interactive CD-ROM related to pregnancy prevention.*

Although teen pregnancy rates have declined in recent years, they are two times higher in the United States than any other industrialized country (Yampolskaya, Brown, & Vargo, 2004). Every 26 seconds another adolescent girl becomes pregnant resulting in roughly one million teen pregnancies annually in the U.S. (Sarri & Phillips, 2004; School Board News, 1999). In fact, the Center for Disease Control and Prevention (2006) reported 47% of high school students have had sexual intercourse in 2003. There is no national data which provides statistical information on how many teen pregnancies occur in adolescents with disabilities (Jones & Domenico, 2005).

Having a disability places a teen at an increased risk for pregnancy, as the disability itself may lead to factors such as poverty, initial school failure, behavioral concerns, and family problems (Yampolskaya, Brown, & Greenbaum, 2002). Unfortunately, there are many misconceptions about the sexuality of youth with disabilities, the most common being that they are asexual and do not need education about their sexuality (Fritz, 2003). Youth with disabilities need information about values, morals, friendship, dating, love, and intimacy. They also need to know how to protect themselves against unwanted pregnancies, and they need to be educated about positive parenting styles and responsibilities (National Information Center for Children and Youth with Disabilities, 1992).

Teens in the lowest quartile of academic achievement, including those with disabilities, are three times as likely to become parents and leave school prematurely (Manlove & Moore, 2001; Wagner, 1991). Additionally, in a recent report, approximately one third of female students cited the birth of a child as the reason they dropped out of school (Bridgeland, Dilulio, and Morison, 2006). In addition, teens with disabilities experience other challenges that further complicate their pregnancies. Young maternal age coupled with identified disabilities has highlighted the need for support programs focused on teaching teen parents basic child rearing practices (Tymchuck, Hamada, Andron, & Anderson, 1990).

### **Students with Disabilities**

Students with mild intellectual disabilities such as learning disabilities, mild mental retardation, emotional and behavioral disorders, and speech and language disorders were selected

as the target audience for this project because of their high incidence in middle and secondary school populations. The largest and most common group of teens with disabilities is youth with learning disabilities (LD). While youth with LD may have average or above average IQ scores, they experience difficulty in the basic skills of reading, math, and writing. They often have auditory processing and visual perception problems that affect how they receive and process information. In a study of students with mild mental disabilities and their teachers, Brantlinger (1992) reported that only one-third of teachers offered comprehensive sex education or family life programming to their students. Teachers also noted that a limited amount of information was available on sex education in special education classrooms. Youth with emotional and behavioral disorders and attention deficit disorders are also considered high incidence populations. These youth are challenged by impulsivity, inability to attend, and poor organizational skills that impact their ability to learn new information as well as to relate socially (Wenger, Kaye, & LaPlante, 1996).

When given appropriate learning opportunities, students with disabilities can learn the basics of appropriate health management and benefit from discussion and activities relating to personal relationships (Carter, 1999). As students with disabilities are integrated into the mainstream of society, they need guidance and instruction appropriate to their learning needs (May, Kundert, & Greco, 1993). Fritz (2003) supported this notion, stressing that education about human sexuality and sexual behavior for developmentally disabled students must occur at the student's developmental level. Further, interventions for youth with disabilities must include information about responsible decision-making, adult roles, healthy attitudes toward parenting, and positive family attachments (Kirby, 2001).

Students with mild disabilities may receive information that is not adapted to their unique learning needs (Doren, Bullis, & Benz, 1996). Teachers may not recognize the different learning styles of students and, as a result, present information on sexuality, pregnancy, and parenting in the same format to all students. However, teachers impact students' knowledge. Students who reported teachers as primary sources of information for pregnancy prevention received higher scores when tested on accuracy of information (Ansuivi, Fiddler-Woite, & Woite, 1996). In addition, Mauldon and Luker (1996) revealed female students were 33% more likely to use contraceptives after instruction on birth control. Unfortunately, there is insufficient information on whether the educational needs of youth with disabilities differ from those of their non-disabled peers in regards to sexuality, reproductive health, pregnancy, and parenting.

### **Computer Use with Students with Disabilities**

Several studies have determined the effects of computer-based instruction on students with disabilities. Lindstrand (2001) found that computers play positive roles in enhancing the development of language, communication, concentration, and coordination. Students with disabilities who have an opportunity to support their learning using computers retain more, perform better on tests, attend school more regularly, and get better grades and employment than students who do not have that opportunity (Edyburn, 2000; Lewis, 1998; McCoy, 1995; Mechling, Gast, & Langone, 2002). Student motivation and self-esteem are enhanced through the inclusion of computers in an educational setting (Ploeger, 1993). Students with a broad range of disabilities may benefit from technology either for assisting learning or as adaptive hardware and devices to help them gain employment or live independently (Riley, 1997).

CD-ROMs (Compact Disc-Read Only Material) are considered a high-tech teaching strategy. When using multimedia-based computer programs, students with mild disabilities can read at their own pace or with assistance, such as individualized feedback or the pronunciation of difficult words. Introducing text with video allows students to make direct connections between words on the screen and information learned elsewhere, thus making it easier for them to comprehend the meaning of phrases, sentences and passages (National Association of State Boards of Education & Office of Special Education Programs, Office of Special Education and Rehabilitative Services, U.S. Department of Education, 1999). Technology such as CD-ROMs provides different stimuli through which information can be received and it increases self-confidence, allowing users to demonstrate personal proficiency (Lee, McGee, & Ungar, 2001).

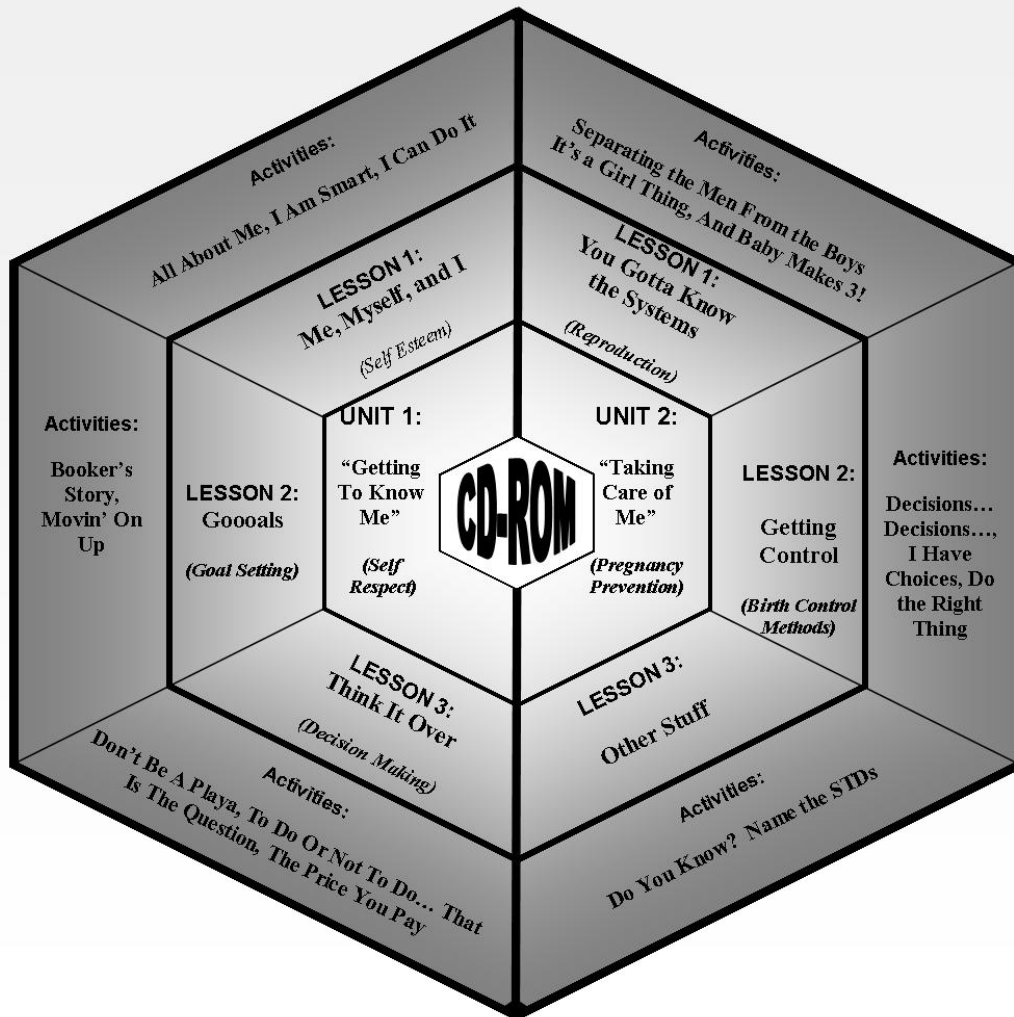
### **Development of Interactive CD-ROM**

Teen pregnancy prevention efforts have emphasized education, skills, abstinence, and access to contraception. However, the definition of what constitutes teen pregnancy prevention is best expanded to include activities that seek to instill teens with confidence and a sense of the future. This speaks to motivation to avoid pregnancy, a critical element in a pregnancy-free adolescence (U.S. Department of Health and Human Services, 2003). There is a lack of information available regarding teaching youth with disabilities about pregnancy prevention; therefore, teachers need curricular materials specifically developed for use with this population. As a result, an interactive CD-ROM was developed to specifically address the learning needs of students with mild disabilities.

Data were collected from 1,015 members of the Association of Career and Technical Education Family and Consumer Sciences Teacher division to determine appropriate content for students with disabilities. Although teachers felt many topics related to pregnancy and its prevention were important for student with disabilities, an overwhelming majority (90%) expressed the need for students to understand their own personal goals and values. This is substantiated by Winter (1997), who stressed the best protection teenage girls have against becoming pregnant is to have life goals. Various other studies provide evidence that having clear educational goals are associated with fewer incidences of teen pregnancies (Manlove, 1998; Stewart, 2003; Yampolskaya et al., 2004). Based on these national survey results, contents of the CD focus on self-respect and pregnancy prevention.

The CD-ROM addresses the topic of pregnancy prevention in real-world settings. The emphasis on real-world scenarios using realistic characters with recorded voices makes the topics engaging by taking participants through a “trip” that identifies intervention strategies for teens with disabilities. Students interact with a variety of learning situations that present knowledge and facts about pregnancy prevention and responsible adult living. There are opportunities throughout the CD for students to make choices and decisions, and then view possible results and consequences based on their decisions. In addition, there are places within some activities where students can obtain printouts from certain activities they complete. Table 1 presents contents of the CD-ROM.

Table 1  
*Contents of CD-ROM*



The CD-ROM contains 2 units, 6 lessons, and 16 corresponding activities. Unit 1 deals with self-respect while Unit 2 focuses on pregnancy prevention. Titles that would catch the interest of teens were selected. For example, the activity on self-esteem is titled “I Can Do It!”, the activity on goal setting is “Movin’ On Up”, the activity on decision making is named “The Price You Pay,” and the lesson on reproductive systems is titled “You Gotta Know the Systems.” All lessons and activities on the CD are narrated to accommodate students with low reading and/or comprehension levels. Narration and sound allow for individual student use with a headset or for small group settings.

The CD was field-tested in several states: Alabama, Alaska, Georgia, New Mexico, Oklahoma, Pennsylvania, and Virginia. Family and consumer sciences and special education teachers participated in field-testing with students in inclusion settings. Educators field-tested the CD in their classrooms. An evaluation form was completed for each of the activities included in the CD. Teachers provided specific information regarding items such as ease of navigation within the CD, appropriateness of the reading level for their students with disabilities, accuracy

of information, sequencing of narrative and graphics, whether students were interested in the content, and if they completed the activities. Feedback provided from field-testers was incorporated to assure the format, content, and navigation of the CD-ROM was appropriate for the target audience, students with mild mental disabilities.

### **Conclusion**

It is the researchers' hope that family and consumer sciences and special education teachers will implement this CD when instructing students with mild disabilities about pregnancy prevention. Although the target audience for the CD is students with mild intellectual disabilities, students who are academically at-risk or have low reading levels may also benefit from the information provided. Because the content of self-esteem and pregnancy prevention is appropriate for all students, the CD-ROM could also be used with regular education students as an introduction to or a review of this information. Thus, while the CD was created with a focus on one particular group of students, teachers can broaden its use to include many other students within their classes. Additionally, the use of computers is highly effective in engaging all students in academic skills. Through the use of interactive lessons that apply real-world applications, teachers may be able to positively impact the future decisions and lives of their students.

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