

English Language Learners' (ELLs) Attitudes toward Computers



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■ Attitude

“An evaluative disposition toward some object based upon cognitions, affective reactions, behavioral intentions, and past behaviors...that can influence cognitions, affective response, and future intentions and behaviors.” (Zimbardo & Leippe, 1991)

■ Attitudes toward Computer

“A person’s general evaluation or feeling of favorableness or unfavorableness toward computer technologies (i.e., attitude toward objects) and specific computer-related activities (i.e., attitude toward behaviors)” (Smith et al., 2000)

Why should we look at attitudes toward computer?

- **Indicator/predictor of behaviors and behavioral intentions (Levine, T. & Donitsa-Schmidt, 1998)**
- **Attitudes influence not only the acceptance of computers, but also future behaviors (Busch, 1995; Woodrow, 1991)**
- **“Positive, anxiety –free attitude toward computing is a necessary prerequisite of computer literacy” (Simonson et al. 1987)**
- **The success of computer systems is largely dependent upon the attitudes of both instructors and students (Lawton & Gerschner, 1982)**

Theoretical Frameworks

Fishbein & Ajzen (1975)'s theory of reasoned action

(Levine, T. & Donitsa-Schmidt, 1998)

Beliefs

Attitudes

Attitude
Toward
Computer Use

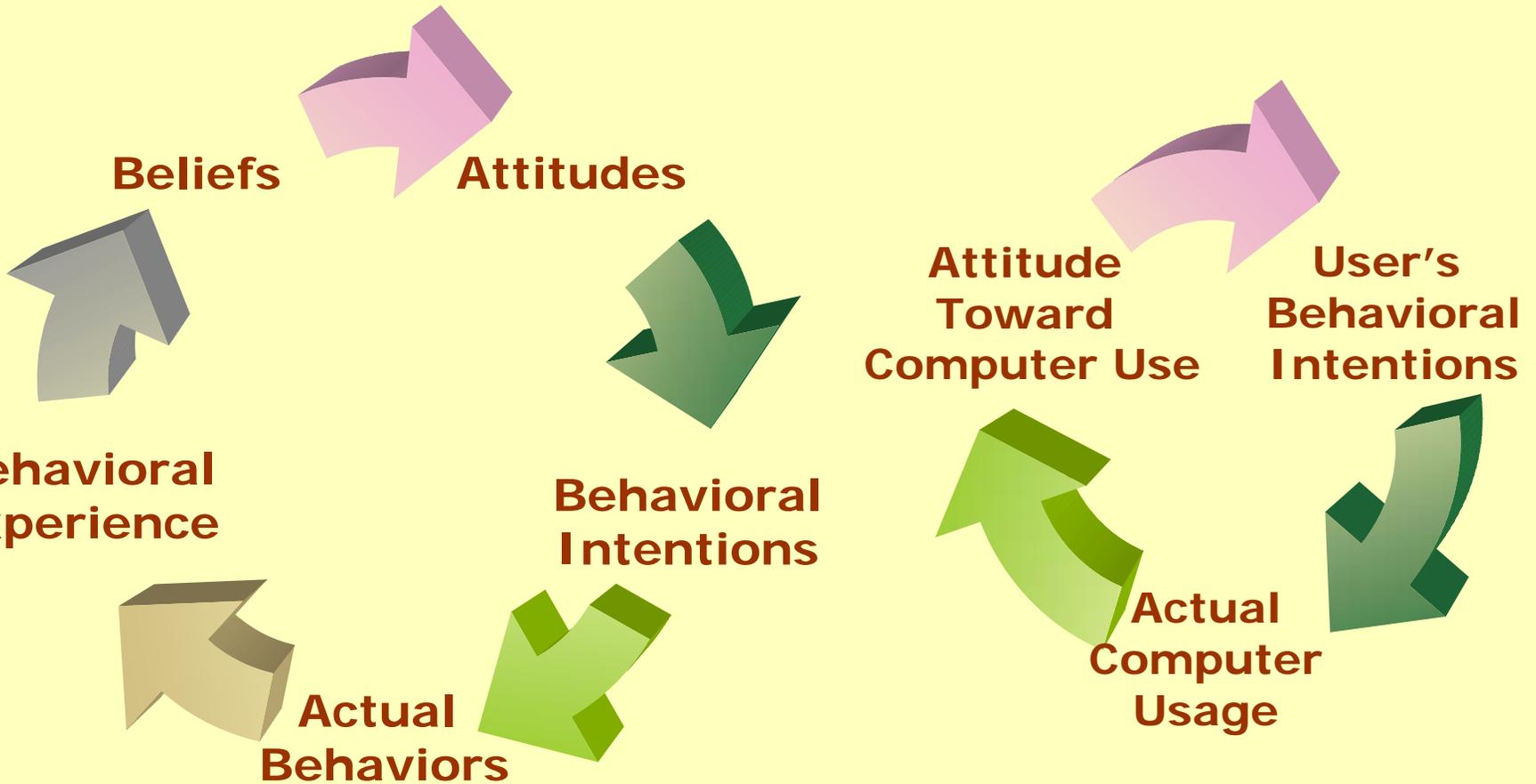
User's
Behavioral
Intentions

Behavioral
Experience

Behavioral
Intentions

Actual
Computer
Usage

Actual
Behaviors



**COMPUTER
KNOWLEDGE**

**COMPUTER
USE**

**LEARNING
STYLES**

**COMPUTER
ATTITUDES**

AGE

**COMPUTER
OWNERSHIP**

EXPERIENCE

GENDER

COUNTRY

Research Methodology

Quantitative (Survey)

Questionnaires (4 or 5-point Likert-type scales)

- *Stevens' Computer Survey*
- *Reece & Gable's Attitudes Toward Computers,*
- *Gressard & Loyd's Computer Attitude Scales*
- *Griswold's Computer Use Questionnaire*
- *The Bath County Computer Attitude Scale*

Computer Attitudes Scale

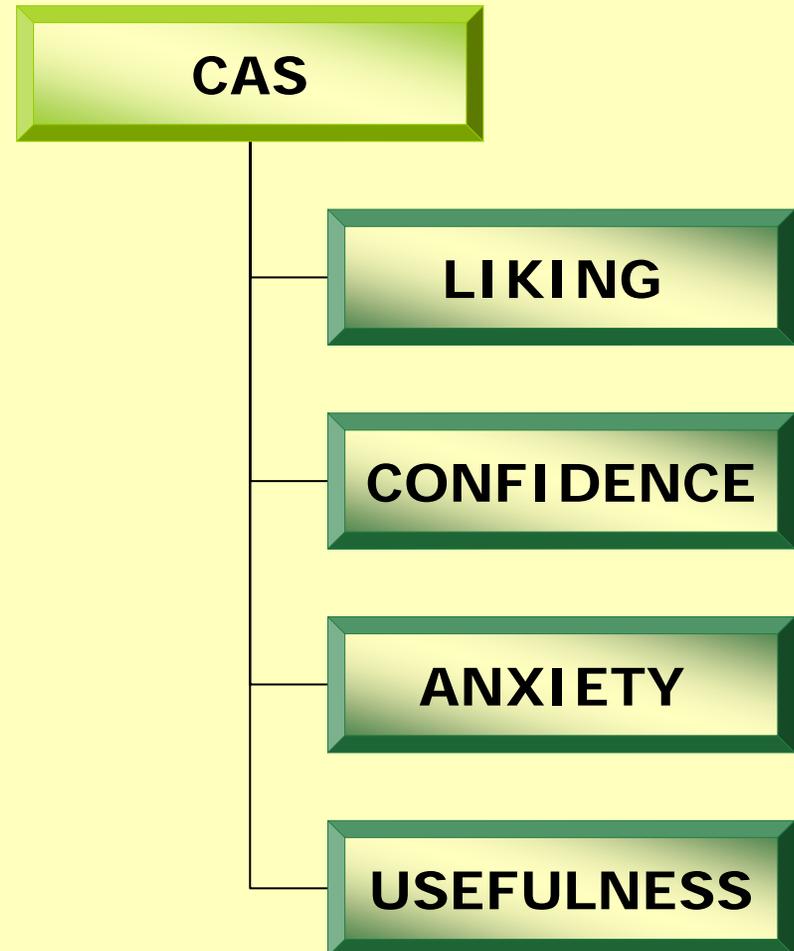
(Loyd & Gressard, 1984; Loyd & Loyd, 1985)

- "The most extensively used and tested scale" (Woodrow, 1991)

- "Achieved most popularity and use" (Al-Khaldi, M. & Al-Jabri, 1998)

- 40 items, a 5-point Likert-type scale

- Coefficient alpha reliabilities of 0.89, 0.89, 0.90, and .82 for the subscales, and 0.95 for the total



I. Gender & Computer Attitudes

- **Mixed(Whitley, 1997), inconsistent (Yaghi, 1997) and “conflicting and confusing” (Kay, 1992) results**
- **Males reported more experience in programming and playing games, and using the computer more hours weekly than females (Schumacher, Morahan-Martin, 2001)**
- **Males tended to show more positive attitudes and feel more comfortable and competent with computers (Busch, 1995)**
- **The social and cultural environment (Shashaani, 1997); the process of socialization (Mitra, 1998), the lack of female role models (Young, 2000), and people’s perceptions, attitudes and behaviors (Shashaani, 1997)**

II. Computer Experiences & Attitudes

- **Inconclusive, mixed results due to a lack of agreement on the definition of computer experience (Smith et al., 2000)**
- **A positive relationship between computer experience and computer attitudes (Al-Khaldi & Al-Jabri, 1998; Gardner et al., 1993, Levine & Donitsa-Schmidt, 1998, Pope-Davis & Vispoel, 1993)**
- **More experienced users are likely to be less anxious and have a more positive attitude toward the computer than less-experienced users (Mitra & Steffensmeier, 2000)**
- **Unstructured computer experience is strongly correlated with attitudes (Woodrow, 1994)**

IV. Computer Ownership & Attitudes

- **Ownership of home computers has a positive effects on attitudes toward computers (Casey, Chisholm & Irwin, 2002, Schumacher & Morahan-Martin, 2001; Shashaani, 1997; Yaghi, 1997)**
- **A significant interaction between gender and ownership (Yaghi, 1997)**
- **It relates to economic status, parental support, and geographic areas (Casey, Chisholm & Irwin, 2002)**
- **Home ownership of computers was also found significant in the formation of attitudes toward computers → The importance of family support (Casey, Chisholm & Irwin, 2002)**

Research Problems

- **Computer is another foreign language for ELLs**
- **Cultural and linguistic differences**
- **Lack of competency (related to prior learning experience) and comfort with computers**
- **Lack of access to computer and the Internet at schools and home**
- **Little research done with ELLs on computer attitudes and behaviors**

School-aged English Language Learners

	ELL Enrollment 2003-4	ELL Enrollment 1993-4	% Change from 1993-4
Total US	5,112,081	3,552,497	43.9%
Maryland	27,849	14,336	94.3%

ELLs in Maryland Public Schools

	Total Enrollmen t	Growth From 93-4	ELLs	Growth From 93-4
1993-4	947,520	--	14,336	--
2003-4	847,722	-10.5%	27,849	94.3%

Sources: U.S. Department of Education

Purpose of the Study

- To investigate English Language Learners' attitudes toward computers and the variables that are significantly associated with their attitudes



- What are the factors that affect computer attitudes among English Language Learners?

Practical Issues & Challenges

1. Instruments

- No single adequate instrument for ELLs
- Language problems
- Back-translation technique

2. Permission

- IRB from the University of Maryland
- Parent's consent form
- Translation

3. Subject

The End.... Thank you!

