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# Acceptance and Use of E- Library Services in Ugandan Universities

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# Background

- Increased use of ICT in University libraries results in hybrid systems
  - Donors provide funding to support ICT infrastructure in university libraries in Developing Countries (DC) such as Uganda
    - has enabled university libraries to provide e-services to end-users.
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# The Problem

- People think that introducing new technology results in its use.
    - Technology acceptance research show that there are other factors.
  - Lack of evaluation models for library ICT use even in developed countries.
  - Absence of tested and validated technology acceptance models under conditions prevalent in DCs (Baba & Broady, 1998).
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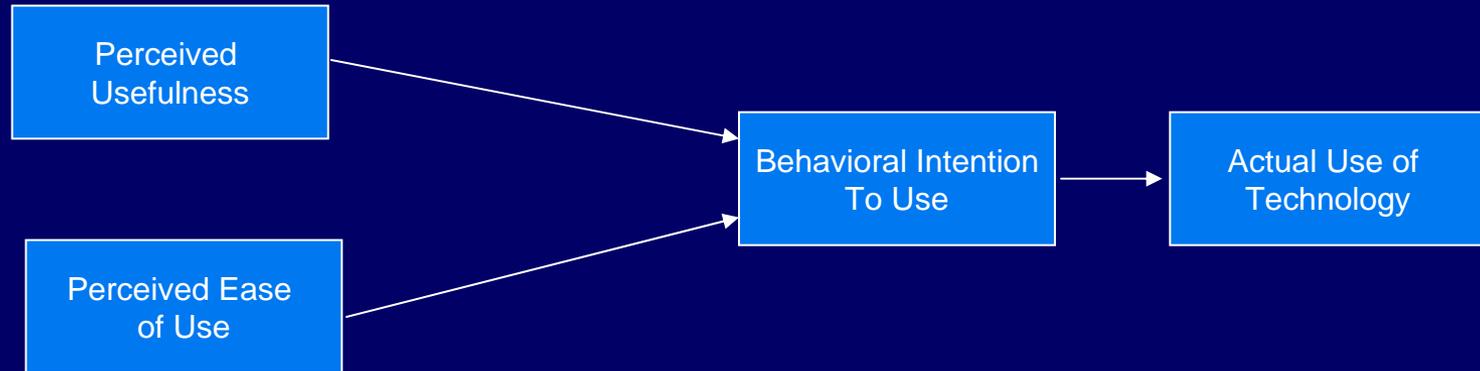
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# Study Objective

- To develop a model for measuring end-users' acceptance and use of e-library services with special reference to universities in Uganda.
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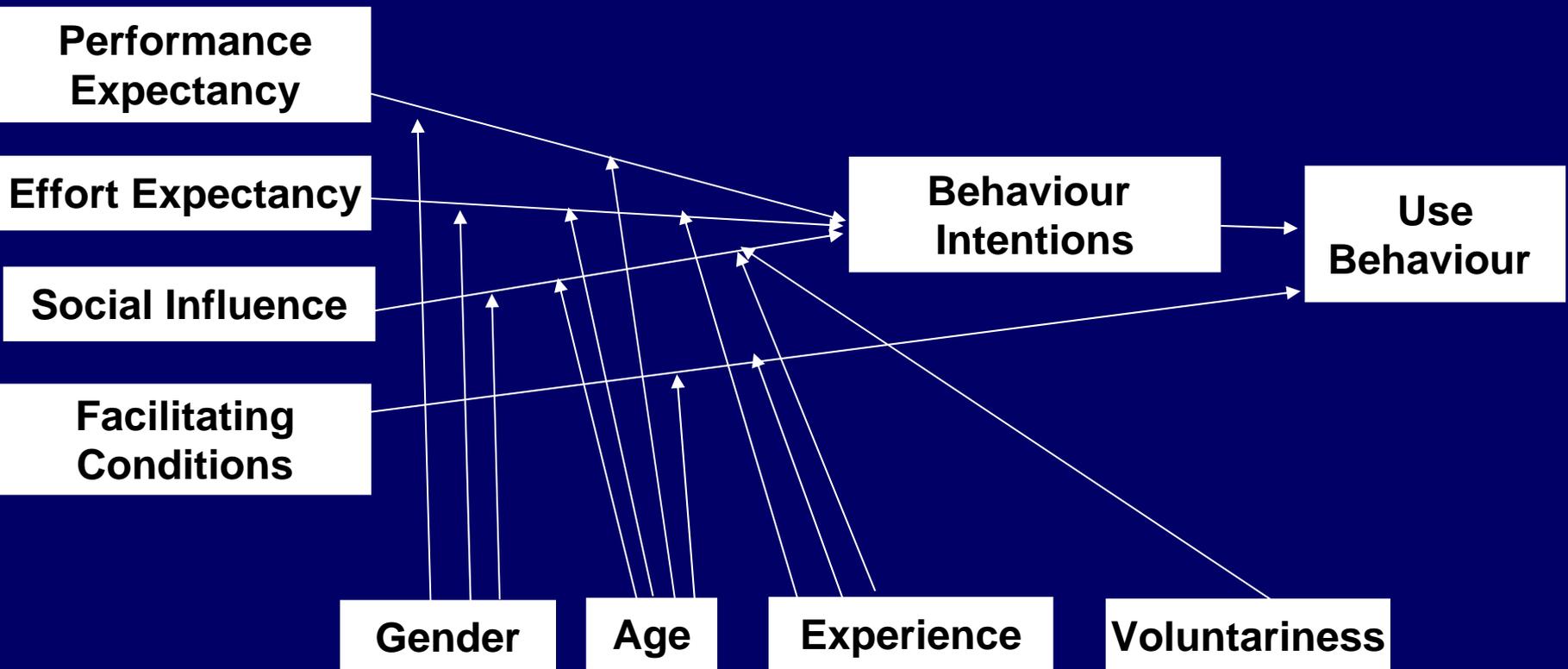
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# Technology Acceptance Model (TAM). (Davis, 1989)



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# Theoretical Model: UTAUT (Vanketesh et al, 2003)



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# Motivation

- UTAUT provided the motivation for this study because it:
    - Provides determinants of non-acceptance and non-use
    - Has demonstrated up to 70% accuracy predictive levels
    - One of the latest A & U models
  - Vanketesh's directive for further research
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# Modifications to Model

- Replace: *Effort Expectancy* with *Relevance*
    - Rationale: A service must be appropriate to attract usage
  - Replace: *Voluntariness* with *Awareness*
    - Rationale: No compulsory use in a library setting; users require to know about availability of the services
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# The Study Hypotheses

H1. End-users in Universities accept and use e-library services.

H2. Relevance demonstrates an effect on behaviour intention to use e-library services

H3. Relevance moderated by awareness demonstrates an effect on behavior intention to use e-library services.

H4. The SOUTAUT constructs account for a significant percentage of variance on user intention to use e-library services.

~~H5. Behaviour usage account for a significant percentage of variation of perceived benefits.~~

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# Methodology

- Develop study tool based on UTAUT model
  - Validate instrument using data from cross sectional survey
    - Survey Population: 2 Universities in Uganda
    - Sample Population: 20 regular end-users of e-library services
  - Use data collected to provide evidence for or against each hypothesis
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# Instrument Design

- Based on UTAUT Model instrument
  - 39 items in the study constructs.
  - 11 demographic questions with one variable in each.
  - 8 study constructs
    - 5 from UTAUT without major changes.
    - 3 additional constructs with new statements.
    - All statements in study constructs approved by two scholars.
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# Analysis of Pre-test Study

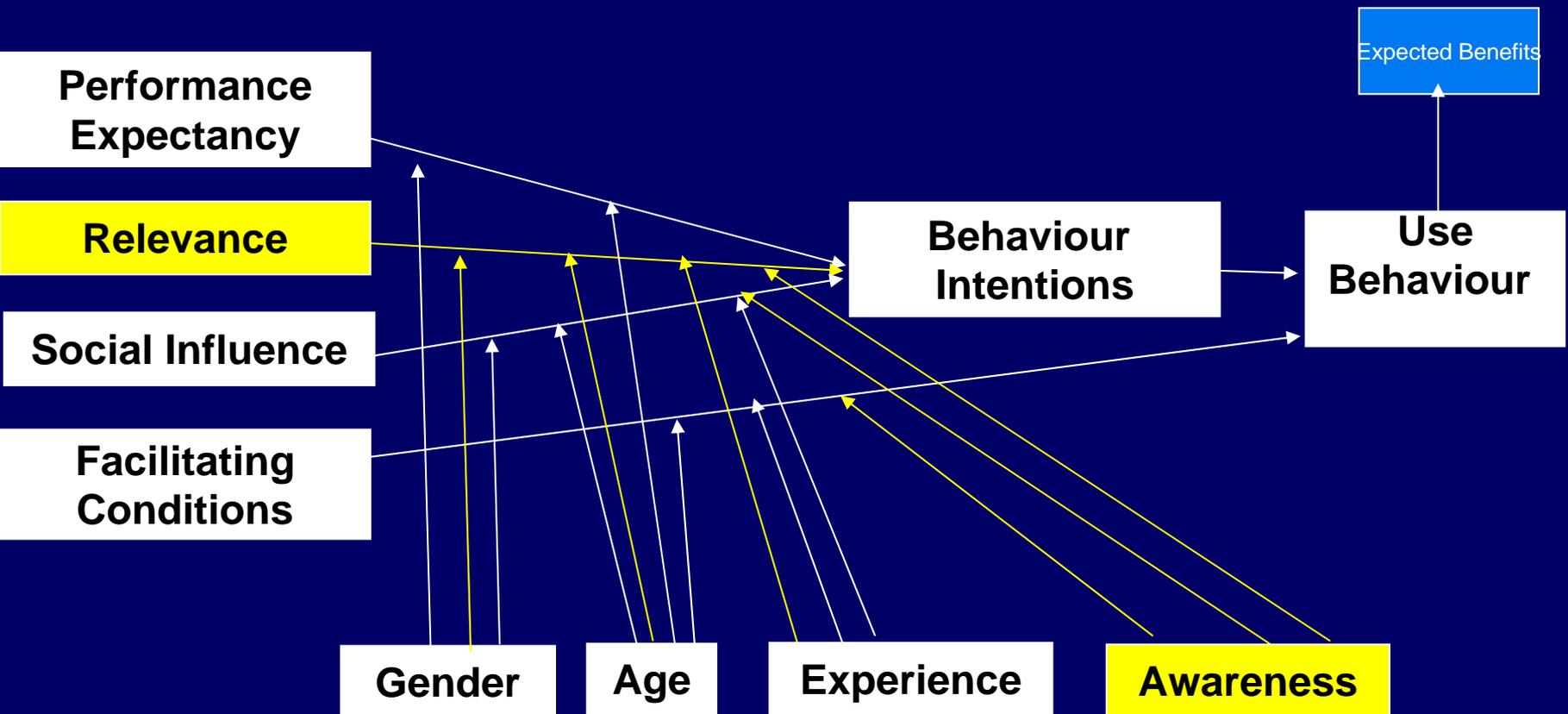
- Data collected from 20 respondents at two sites in April 2007
  - Analysis performed on data using SPSS, STATA & PLS-Graph
  - Courtesy of Prof. W.W. Chin for providing free PLS-Graph software.
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# Pilot Construct Validation

- Factor loadings & factor scores generated
  - Constructs evaluation for ICFL
    - Constructs with less than 0.6 loading were dropped
  - 12 of the 39 statements were removed
  - Awareness, Relevance & Social Influence constructs most affected.
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# Modified Model Results from Pretest: SOUTAUT



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# Testing the Hypothesis (1)

H1. Library end-users in Univs. accept & use e-library services.

SUPPORTED

Positive beta coefficients for BI construct account for 11% UB for 41% EB for 81% all total 133% variances. The piloted end-users significantly accept and use e-library services.

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## Testing the Hypothesis (2)

- H2.Relevancy demonstrates an effect on behavior intention to use e-library services.
  - Rejected
  - Relevancy contributes negative coefficient of 7% towards A. & U. of e-library services.
  - This hypothesis is not supported.
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## Testing Hypothesis (3)

H3. Relevance moderated by awareness demonstrates an effect on behavior intention to use e-library services.

➤ SUPPORTED

➤ Positive beta coefficients of relevance moderated by awareness at 10.54 and significant ( $p < 0.01$ ).

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# Testing the Hypothesis (4)

H4.SOUTAUT model constructs account for a significance % of variance on user intent to use e-library services.

➤ SUPPORTED

Positive beta coefficients for BI constructs account for 11%, UB for 41%, EB for 81%; and all total to 133% variances.

Study data of 20 end-users accept and use e-library services.

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## Testing the Hypothesis (5)

H 5.BU account for a significant percentage of variation of perceived benefits.

➤ SUPPORTED

➤ Behavioral usage positively contributes 90% towards expected benefits.

➤ This hypothesis is significantly supported.

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# Moderator Variables

- Gender moderates PE, Re and SI
- Age moderates all four constructs
- Experience moderates Re, SI & FC.
- Like Experience, Awareness moderates Re, SI & FC

Moderation in varying degrees yet to be established.

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# Limitations

- Very few respondents, knowledgeable about e-library services.
  - Respondents from Uganda only.
  - Self reporting instrument
  - Results may not be representative of Uganda & Developing Country.
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# Summary & Conclusion

- Results of Pre-Test direct main study.
  - A model and accompanying tool to measure levels of end-users' acceptance and use of technology services has been developed.
  - The preliminary results of SOUTAUT model predict 133% of end-users' acceptance and use of the new technology. Improvement of UTAUT
  - Main study of 8 universities: targeting three faculties and sampling 494 subjects underway.
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