Factors Influencing the Pursuit of IT Certifications

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Overview

- Purpose of Study
- Research Question
- Participants
- Theory
- Results
- Conclusions
- References

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Purpose of the Study

- An attempt to understand the factors that influence students to pursue Information Technology (IT) certification.

- By determining the factors, faculty can influence students to pursue IT certification along with their academic degree

    - Increases the chance of students gaining employment

    - Increases completion rates for the college

        - Minnesota funding is in part tied to several factors including completion rate (Omnibus Higher Education Finance Bill, 2013).

Research Question

- ResQ1: What factors affect the decision of community and technical college IT majors to pursue IT certification?

- Sub-Q 1a: Do students have a positive or negative attitude toward earning an IT certification?

- Sub-Q 1b: What impact do the beliefs of others (subjective norm) have on a student's decision to pursue IT certification?

- Sub-Q 1c: To what degree do students believe they have the items needed (perceived behavior control) to pursue IT certification?

- Sub-Q 1d: To what extent do students believe IT certification will have positive influence on their employment benefits (cognition)?

- Sub-Q 1e: To what degree do students have positive feelings towards IT certification (affect)?

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Study Participants

- Minnesota community and technical college students
  - AS or AAS IT program
  - Within 1 year of graduation

Degree Categories and Number of Colleges	
Degree Category	Number of Colleges in Study
Computer Security & Forensics/IT Auditing	2
Computer Networking and System Administration	10
Computer Science and Information Systems	6
Computer Technologies and Supports Services	6
Management Information Systems	6

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Study Participants (cont'd)

- Demographics

Gender of Participants		
Gender	Number	Percentage in Study
Male	95	76.6
Female	29	23.4

- Participation
  - 13 colleges met the qualification criteria
  - Students from 12 of the 13 colleges participated

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Theory

- ## Theory of Planned Behavior

  - ### Behavior
    - The degree of control a person has over internal and external factors (Ajzen, 1985).

  - ### Intention
    - Cognitive representation of how ready a person is to complete a certain behavior and is the immediate antecedent of a behavior

  - ### Attitude
    - Either positive or negative and thus can determine the undertaking of a behavior (Ajzen, 1991).

  - ### Affect
    - How a person will feel emotionally (i.e., happy, sad, fear, anger, envy) about doing a particular behavior (Hunsinger and Smith, 2008)

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Theory (cont'd)

- **Perceived Behavioral Control**
  - A person's perception of his/her ability to perform a specific behavior and the level of difficulty for completion (Ajzen, 1991).

- **Cognition**
  - How a person believes he/she will feel about doing a particular behavior (Hunsinger and Smith, 2008)

- **Subjective Norm**
  - People's beliefs and how he/she thinks those close to them will view a particular behavior (Ajzen, 1991).
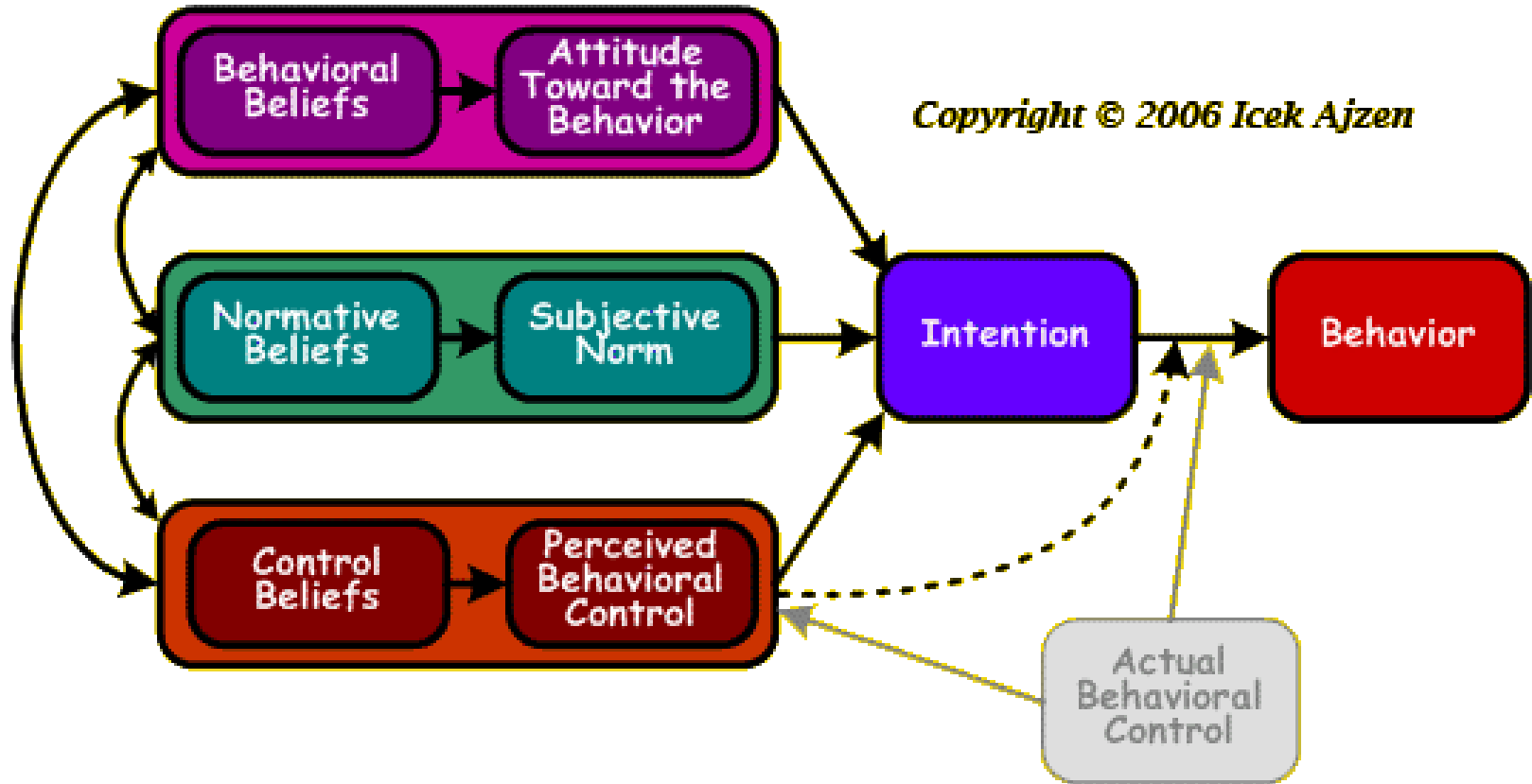
Theory (cont'd)

Figure 1: Theory of Planned Behavior. From Theory of Planned Behavior Diagram, 2006. Copyright 2006 by Icek Ajzen. Retrieved from http://people.umass.edu/aizen/tpb.diag.html. Reprinted with permission.

Results

Certifications Students Intend to Pursue	
Certification	
Cisco Certified Network Associate (CCNA)	53.2%
Network+ (CompTIA)	31.5%
Cisco Certified Network Professional (CCNP)	9.7%
Microsoft Certified Professional (MCP)	23.4%
Microsoft Certified Systems Administrator (MCSA)	15.3%
Microsoft Certified Systems Engineer (MCSE)	4.0%
Microsoft Certified Solution Developer (MCSD)	3.7%
Microsoft Certified Database Administrator (MCDBA)	8.9%
Oracle Certified Professional - Database	4.0%
Certified Information Systems Security Professional (CISSP)	5.6%
Security+ (CompTIA)	28.2%
A+ (CompTIA)	45.2%
Certified Novell Administrator (CNA)	1.6%
Certified Novell Engineer (CNE)	1.6%
Other	3.2%
None	8.9%

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Results

- **Referent Groups**
  - Measured Subjective Norm
  - "_____ think I should pursue an IT certification within the next twelve months"

  - Professors 81.5%
  - IT Managers 75%
  - Advisors 71.8%

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Results

- **Self-efficacy**
  - The study determined the level of Perceived Behavioral Control through self-efficacy
  - "I _____ to earn an IT certification within the next twelve months"

  - Learning ability 97.6%
  - Knowledge 93.5%
  - Skills 92.7%
  - Money and Resources 71.8%

Results

- **Salient Beliefs**
  - Used to measured cognition
  - "Earning an IT certification within the next twelve months in the area noted on the previous page:"

  - Increase marketability to potential employers 99.2%
  - Likelihood of getting hired 97.6%
  - Differentiate me from other candidates 97.6%

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Results

- **Affect**
  - Positive emotions
  - "I would _____ pursuing an IT certification in the next twelve months"

  - Proud 89.5%
  - Happy 80.6%
  - Excited 73.4%
  - Love 73.4%

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Conclusions

- Each construct examined has an impact on pursuing IT certification.
- Students attitude has the largest impact when deciding to pursue IT certification
- Students generally have a positive view of certification
- Professors were the single largest influence
- Money and resources were the largest hindrances
- Learning ability was the greatest enabler
- Marketability is the largest area of Cognition (thinking)
- Pride is the largest area for Affect (emotion)

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Thank you!

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