Students’ attitudes towards Computing

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Introduction

- Allport (1935)
  
  “A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related”
Introduction

Bem (1970)

• Favourable attitudes will advance their performances and by identifying their “likes” and “dislikes” can help them achieve their goals
Attitude

• **Reaction** after an **action** if it is likeable or not, according to an individual’s way of thinking and feeling.

• **Students’** attitudes towards learning computing depends on the way they **feel** about the course.
Technology

- Enabler and Provider
- Advancing in Career Opportunities
- Analyser of problems
- Efficient and acceptable results
Students’ achievements (results)
- At Risk report (7 weeks)
- Final Overall Results (14 weeks)
- Computer Applications II (HCS184)
- Organization System Analysis
- System Requirements
- Proposed System RDBMS
Computer Applications II (HCS184)

- 2 Pre-requisites Computer Courses
  1. HCS081 Foundation Computer Studies
  2. HCS183 Computer Applications I
Factors

1. Prior knowledge
2. Pedagogical Content Knowledge
3. Motivations (Environment/Peer Support)
4. Culture
5. Gender
6. Accessibility/Affordability
Prior Knowledge

- Maua’i & Temese, 2012
- Zhu, Wing Au & Yates, 2013
  - Students’ attitudes and Performances
  - Experience
- Dupagne & Krendl, 1992
  - Fear of Technology (“Computer Anxiety”)

Tertiary ICT Conference 2017
6-8 September
Shaken Not Stirred
Pedagogical Content Knowledge

Laurillard, 1993
Holmoc, McIver & George, 2001
• Science Facilitators Teaching methods
• Digestive content
• Types of Learners
Motivations (Environment/Peer Support)

- Liu, 2014
- Usun, 2002
  - Interactive Learning
  - “Profit Tool”
  - “Work Speed, Work Efficiency, Work Power and removal of human error from work activities”
Culture

- Otsuka, 2006
- Pacific Regions
- Priorities, Cultural Values and Beliefs
- “The pressure to maintain their moral and social obligations within the community”
Gender

- Cohoon, 2001
  - Female vs Male

- Maua’i & Temese, 2012
  - No effect
Accessibility

- Osman & Alfred, 2014
- One laptop Per Child
- Usun, 2002
- Rhema & Miliszewska, 2014

“Initial Factor” “shape” students’ attitudes and their learning interests in Computing
1. Confidence
2. Interests
3. Engaged
4. Learn
5. Motivation

Computer + Student = Tertiary ICT Conference 2017
6-8 September
Methodology

• Mixed Methods
  • Quantitative Results
    • Course Work (7 weeks)
    • Final Results (Overall)
  • Qualitative Closed and Open Ended Perceptions
Instrument

• Instrument: Survey Questionnaire (35)
  • Use Computer Likert Scale
    • 1 Never
    • 5 Frequently Used
  • Likes and Dislikes
    • 1 Totally Disagree
    • 5 Totally Agree
Factors

1. Prior knowledge
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Results

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<th>Age</th>
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- Female: 72%
- Male: 28%
Prior Knowledge

• Early Education (Secondary)
  • 80% Experienced
• HCS081 Foundation Computer Studies ✔
• HCS183 Computer Applications I ✔
Use of own Computer

- Seldom: 24%
- Neutral: 24%
- Frequent: 36%
- More Frequent: 16%

Own Computer

- Yes: 84%
- No: 16%
Interests

What motivates them to learn Computer?
Interests

1. Solving Problems (engaged, interaction)
2. Useful tool
3. Worth my time
4. Easy to complete tasks
5. Required for a Job
Course Work
Limitations

- Time
  - Week 7
- Participants
  - HCS184 class
  - Gender
- Instrument
- Culture
Recommendations

- Before and After
- Semester (14 weeks)
- Instrument
- 3 factors
Conclusions

1. Prior knowledge
2. Environment
3. Culture
Conclusions

1. Prior knowledge ✓
2. Environment ✓
3. Culture ❌
Fa’aafetai Lava!