

Mobile Revolution

Changing the Face of Technology
Instruction at Halifax Public Libraries

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Then and Now

2007

One Platform: Windows XP

Learners = novice, senior

Standard library equipment – multi-user devices

Group setting

Set curriculum – topics pre-determined by instructor

Content/concept focused

Instructor = expert – “Here’s what you need to know”

2014

Explosion of platforms – Windows 8, Mac, iOS, many flavours of Android

Learners = varied levels, wider ages

Student’s equipment – single-user devices

One-on-One instruction

Topics determined by student needs

Task-focused/Trouble-shooting

Instructor = collaborator - “Tell us what you need to do. Let’s see if we can figure it out together.”

Two Categories of Learners with Very Different Needs

2014



- 60-100
- Complete novice
- What can it do for me?
- Sceptical, fearful, self-conscious
- eBooks!

iPads easier for beginners?
Yes and no – Prior knowledge
design assumptions (e.g.
implicit vs. explicit use of
Internet)

- 50-75
- Prior computer experience
- Adjusting to new platforms/interfaces
- Wish to accomplish specific tasks
- In a hurry, impatient
- Frustrated that things have changed, resent re-learning
- eBooks

Grace

- 92 years old
- Some previous experience (email user)
- Bought iPad mini for FaceTime to surprise grandchildren and see great grandchildren
- Attended iPad intro course at Apple Store
- **Things we covered:** App store, eBook apps, email apps, using Siri for dictation (mobility issues), camera

Learned many things, but after 2 years, still dependent on library assistance to download OverDrive materials.

Susan

- Approximately late fifties and recently retired
- Basic Windows experience and somewhat mystified iPhone user
- Bought iPad for trip to France
- **Things we covered:** wifi vs. data, hotspots in France, on-board vs. internet-dependent apps, GPS, Map apps, organizing user interface, Syncing devices, eBooks

Technologically prepared for her Burgundy adventure!

Implications

1. Policies
2. Learning Environment
3. Organizational Resources
- 4. Instructor Competencies**
5. Evaluation

Implication 1: Policies

library

Staff will provide assistance for software and hardware but will not provide support for customers' personal hardware or software used on laptops or PDAs.

Halifax Public Libraries
Public Computer Use Policy

Liability concerns vs. Customer service

Wifi → eBooks → Mobile

Implication 2: Learning Environment

Advantages of 1-on1 Instruction:

- Accommodate individual needs
- Personalized content
- Learner's pace
- Reduce fear of public shame

Implication 3: Resources

Resource	Group Instruction	1-on-1 Instruction
Instructor Time	Session length: 1.5 h Preparation: 0.5 h Equipment set-up: 0.5 h Time/Student < 1 for 3 or more students	Session length: 1 h Time/Student = 1
Venue	Need reservation – constraints on class time	No reservation needed – flexibility!
Administrative	Advanced planning, marketing, instructor scheduling, waiting list management, reminder calls	Instructor scheduling

Service benefits of 1-on-1 instruction outweighed resource costs

Implication 4: Instructor Competencies

New Challenges for Instructors:

- Wider range of topics
- Limited preparation opportunity
- Unpredictability/loss of control
- Adjusting customer expectations
- Learning while teaching
- Troubleshooting

Instructor Support Strategies

Training – Guided hands-on sessions with gadgets.

Exposure – Library purchased gadgets for staff to borrow, take home and play with.

Community – Instructors' mailing list to encourage peer support.

Variable Adjustment

Some instructors adjusted easily while others struggled more (not clearly age-correlated).

Some gained confidence while others' confidence was eroded through experience

Why?

Could more tech training help?

Perhaps a little, but limitations:

- Can never be comprehensive. Too many gadgets/apps etc. to cover them all.
- Technology changing more rapidly than feasible training frequency.

Perplexing Anomaly - Skill variation in personal/work technology use not entirely predictive of instructor comfort level.

Why?

Could different training help?

What other skills might be required?

- Communicate to identify learner's needs
- Identify strategies likely to meet needs
- Unexpected outcome? Adjust strategies
- Guide learner through use of strategies
- Check if needs were met

Reference? Some superb reference sleuths were uncomfortable with 1-on-1 tech training. Why?

Library Research Literature

2011

Colorado Libraries

published by the Colorado Association of Libraries

[Issue 35.1](#) [Issue 35.2](#) [Issue 35.3](#) [Issue 35.4](#) | [Issue 36.1](#) [Issue 36.2](#) [Issue 36.3](#) [Issue 36.4](#)

CRYSTAL SCHIMPF



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Competencies for Technology Trainers: Developing New Skills for Staff in Public Libraries

Crystal Schimpf

Librarians and Paralibrarians as Technology Trainers

One of the principles of public librarianship is providing free and equal access to information. A literate, informed, and engaged public is an essential part of a democratic society. Yet, as information becomes increasingly digital

Still assuming the 2007 model - group instruction with a set curriculum.

Category
Technology skills
Adult learning environment
Communication skills
Individual instructional skills
Class preparation skills
Classroom instructional delivery skills
Instructional design skills
Planning and coordinating skills
Professional development skills

Competencies

Understand and apply basic instructional design principles to develop training materials.

Define desired goals for patron training programs and build a curriculum to meet those goals.

Demonstrate the ability to select and evaluate instructional software, websites and training resources.

Adapt to changes in technology and incorporate those changes into the curriculum.

Understand and utilize best practices in developing online trainings.

In the future, library technology trainers may work less with computers because of increased demand for mobile devices or 3D printers. As the needs of library users change, library technology trainers may give less face-to-face training and may offer more online and virtual training. As researchers continue to study learning theory, new theories may present improved methods for instruction. Perhaps in the future, the digital divide will cease to exist and libraries will find even more new and innovative ways to serve the public.

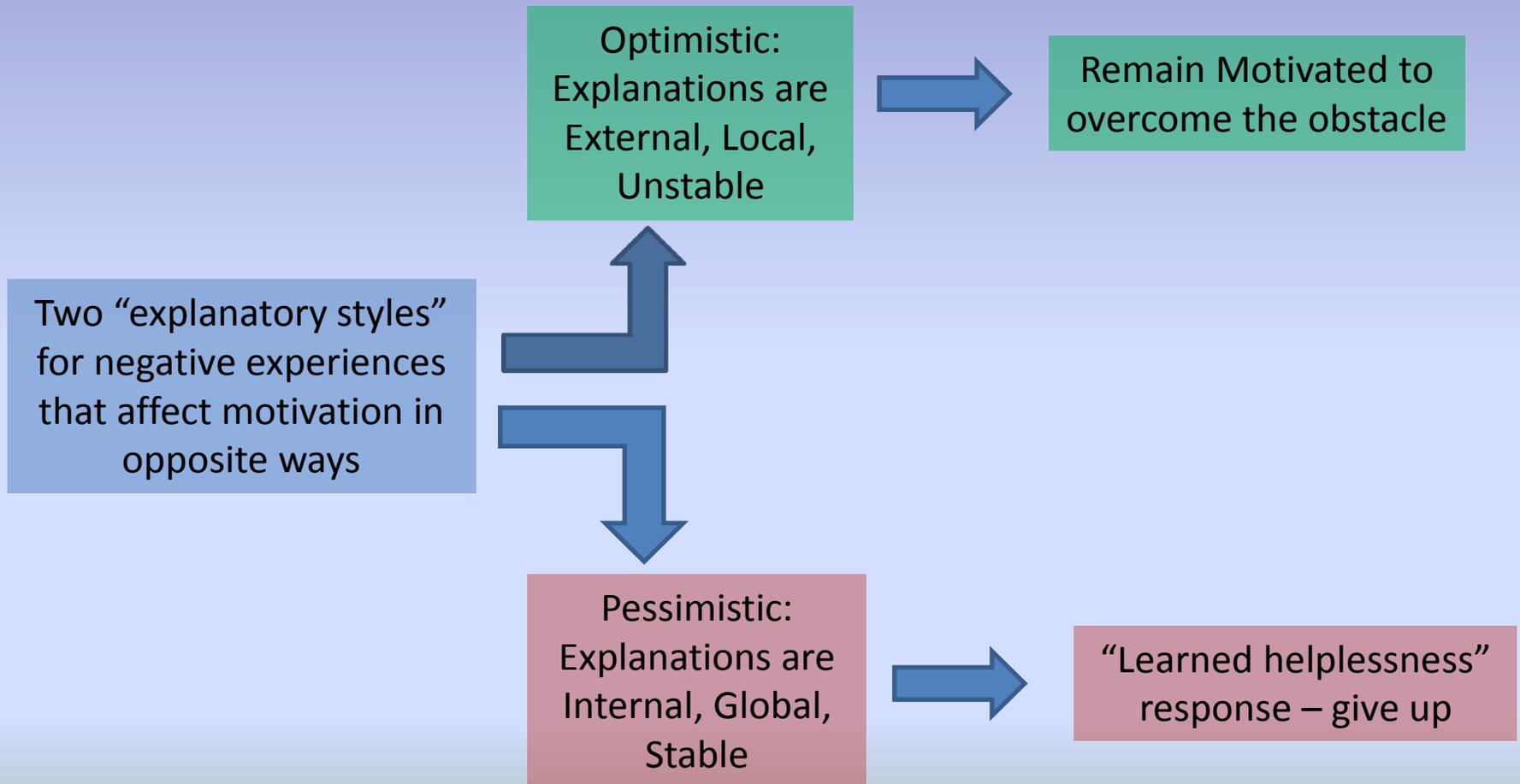
Skillset or Mindset?

Those who adjusted well were:

- inclined to experiment/explore
- comfortable with making mistakes

Innate personality traits? Can training help?

Attribution Theories of Social Psychology



Self Theories

Theory of Aptitude	Mindset	Goal/ Motivation	Response to Setbacks
Incremental	Growth	Learning	Mastery
Entity	Fixed	Achievement	Helpless

Primary author: Carol Dweck

Research Question 1

Can retraining of attributions or self-theories enable someone to change their responses to setbacks?

- Attribution retraining experiments
- Assumption of Cognitive Behavioural Therapy

Research Question 2

Can training be framed in ways that encourage a growth mindset and reduce the likelihood of a helpless response?

- Promising effects observed in controlled experimental settings.
- Longevity and generalizability not clear.

Research Question 3

Do other factors (social expectations, stereotypes) predispose people to favour a particular mindset in certain circumstances?

- Very likely.
 - Gender differences in STEM education
 - Age-related technology fears

Research is Ongoing

Behaviour & Information Technology, Vol. 26, No. 4, July–August 2007, 287–296



How older people account for their experiences with interactive technology

P. TURNER*, S. TURNER and G. VAN DE WALLE

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Dangers of a Fixed Mindset: Implications of Self-theories Research for Computer Science Education

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Suggestions for Libraries

Hiring for Technology Training Roles:

Find ways to explore candidates' default mindsets and attributions with respect to learning new technology.

Employee Training/Organizational Culture:

Frame employee evaluation and training in ways that encourage a growth mindset. Embrace “mistakes” as valuable experiences en route to knowledge.

Implication 5: Evaluation

How do we measure the success of technology instruction programs in public libraries?

- Participation numbers?
- Customer satisfaction?
- Skill acquisition/Learning outcomes?

These traditional measures seem less useful than before.

Daisy

- 86 years old, socially active (acquacize, book club, etc.)
- Zero computer/gadget experience
- Received “thing” for Christmas from daughter. Returned. Received smaller “thing” for birthday. Embarrassed to return. (Android tablet)
- **What we covered:** demonstrated range of capabilities based on personal interests, explained concept of internet, need to pay for wifi to use the “thing” at home

Acknowledged that the “thing” was impressive, but was perfectly content with her camera, her television and books made of paper.

Word of Mouth

- Calls directly to my unpublished office line. All participants in a seniors' aquacize class. Daisy was spreading the word! 😊
- Referrals from Rogers

Further Reading

Theoretical Overviews of Attribution Theories:

- Dweck, C.S. (2000). *Self-Theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press.
- Forsterling, F. (2001). *Attribution: An introduction to theories, research, and applications*. Philadelphia: Psychology Press.

Promising Sources of Future Research:

- Publications of the ACM (Association of Computing Machinery)
- Journal: *Behaviour & Information Technology*
- Gerontology research



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“Play more. Learn more.”

“The illiterate of the 21st century will not be those who cannot read and write but those who cannot learn, unlearn and relearn.”

~ Alvin Toffler

<http://www.alvintoffler.net/?fa=galleryquotes>

<https://deangroom.wordpress.com/2009/12/21/to-quote-unquote-and-requote-21st-century-illiteracy/>

