Mobile Revolution
Changing the Face of Technology Instruction at Public Libraries

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Introduction — 1

Halifax is the capital city of the Canadian province of Nova Scotia. The 14 branches of Halifax Public Libraries are distributed across a large municipal region (160 km across) that includes both urban and rural areas.

Halifax Public Libraries provides basic technology instruction to the public. Changes in consumer technology between 2007 and 2014 changed the needs of our public, and consequently the way we provided this service.

Then and Now

2007	2014
One Platform: Windows XP	Explosion of platforms – Windows 8, Mac, iOS, many flavours of Android
Learners = novice, senior	Learners = varied levels, wider ages
Standard library equipment – multi-user devices	Student's equipment – single-user devices
Group setting	One-on-One instruction
Set curriculum – topics pre-determined by instructor	Topics determined by student needs
Content/concept focused	Task-focused/Trouble-shooting
Instructor = expert – "Here's what you need to know"	Instructor = collaborator -"Tell us what you need to do. Let's see if we can figure it out together."

Students — 2

Typical students in 2007

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

Daisy — 86 yrs.

- No prior computer experience
- Received "thing" for Christmas from daughter. Returned it. Received smaller "thing" for birthday. Embarrassed to return. (Android tablet)
- **We covered:** What is the Internet? Demonstrated Google and YouTube based on personal interests (travel, aquacize, symphony).
- **Outcome:** Acknowledged the "thing" was impressive, but was perfectly content with her television and books made of paper.

Additional category of students by 2014

- Ages 50-75
- Prior computer experience
- Adjusting to new interfaces
- Specific tasks
- Frustrated that things have changed, resent re-learning

Susan — 55+ yrs.

- Basic Windows experience; somewhat mystified iPhone user
- Bought iPad for trip to France
- **We covered:** wifi vs. data, hotspots in France, internet-dependent apps, GPS, map apps, synching devices, eBooks
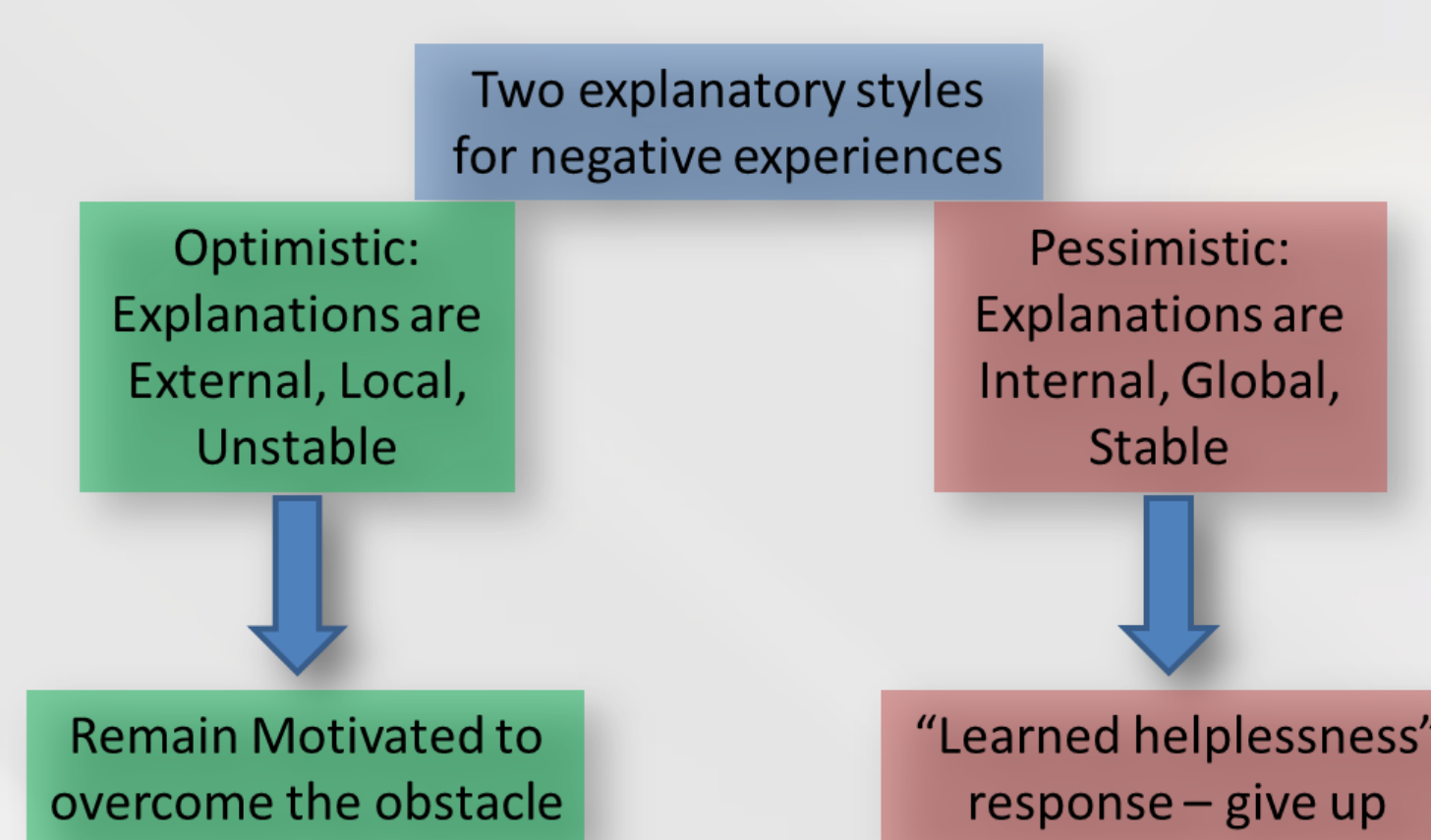- **Outcome:** Technologically equipped for her Burgundy adventure!

Implications — 3

Policies misaligned with reality

> 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*

1-on-1 learning environment

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

Challenges for Instructors
- Unpredictability/loss of control
- Wider range of topics, limited preparation
- Learning while teaching, troubleshooting
- Adjusting customer expectations

Institutional Resources & Program evaluation

Because class sizes were dwindling, changing from group to 1-on-1 instruction did not significantly increase staff time per student served.

Traditional measures of program success were no longer as useful (satisfaction surveys, participation numbers, pre-specified learning outcomes).

However, the service is well-used. Word of mouth referrals keep us busy. For example, many of Daisy 's aquacize friends booked appointments and we've even had referrals from local device sellers!

Instructors — 4

Support Strategies

- **Training:** Guided hands-on sessions with gadgets. Training has limitations:
(i) Can never be comprehensive. Too many gadgets, interfaces and apps to cover them all.
(ii) Can never be current. Technology changing more rapidly than feasible training frequency.

- **Exposure:** Gadgets for staff to borrow, take home and play.

- **Community:** Mailing list to encourage peer support.

Some instructors adjusted easily to the changes. Others did not.

Why?

Just Do It?

Teaching experiences increased confidence for some, but decreased confidence for others.

Skillset or Mindset?

Skill did not seem to completely explain instructors' abilities to adjust:
- **Tech Skills:** Skill with library technology (e.g. ILS) did not seem to predict instructor comfort level.
- **Reference Skills:** 1-on-1 instruction has striking similarities to reference interactions, yet some superb reference sleuths did not adjust easily.

Instructors who adjusted more easily had two characteristics in common:
- **Curiosity:** inclination to experiment/explore
- **Mistakes:** not afraid to make mistakes

Insights from Library Literature?

Very little has been written on competencies for technology instructors in public libraries. Crystal Schimpf's (2012) article is the most comprehensive. However, her work still assumes group instruction with a set curriculum.

Insights from Social Psychology? — 5

Attribution Theories

Attribution theories explore how the causes to which we attribute our experiences shape our responses to those experiences.

Two explanatory styles for negative experiences

Optimistic: Explanations are External, Local, Unstable → Remain Motivated to overcome the obstacle

Pessimistic: Explanations are Internal, Global, Stable → "Learned helplessness" response – give up

Fixed & Growth Mindsets

Carol Dweck (2000) and colleagues' Theories of mind are a type of attribution theory:

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

If you believe you have a predetermined amount of ability (entity theory) you are likely to adopt a fixed mindset and focus on achievement. Fear of discovering/exposing your limitations will lead you to avoid challenges and give up easily without adjusting your strategies (helpless response) when things go wrong.

Can we change our mindset?

Controlled experiments demonstrated that helpless responses can be reduced:
- with explicit attribution retraining
- by framing teaching in ways that encourage a growth mindset

Mindsets in Libraries — 6

Technology Instruction & Mindsets

Teaching 1-on-1 requires instructors to:
- Expose gaps in their knowledge in front of students
- Recover from many mistakes and false starts on unfamiliar equipment
- Repeatedly adjust their strategies

Instructors need a growth mindset to adjust to the new demands.

Future Research

A literature review of applied mindsets research in fields like computer science, education, psychology, gerontology and personnel management could point to practical strategies for:
- **Hiring Practices:** Find ways to explore candidates' technology mindsets.
- **Training:** Provide employee training in ways that encourage a growth mindset.
- **Organizational Culture:** Encourage experimentation and embrace "mistakes".

References & Further Reading

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