

# Learning for Life And the Role of Museums



**John H. Falk**

**Lynn D. Dierking**

Sea Grant Professors of Free-Choice Learning  
Oregon State University

# Overview

- What is learning?
- Why do people learn? When do people learn? Where do people learn?
- Situating museums in a broader context
- Being of value
- Is there evidence that museums have an impact?



**What is Learning?**

# Learning is more than concepts and facts!

- We learn skills
- We learn how to get along with others
- We learn aesthetics
- We learn values
- We learn by doing, seeing, touching, watching, listening, thinking and feeling





- Learning begins with the Individual.
- Learning involves Others.
- Learning takes place Somewhere.
- Learning occurs over Time.



# Why Do People Learn?



# People learn to....

- Satisfy personal curiosity/interest
- Satisfy a need
  - Personal (e.g., illness, environmental problem)
  - Support needs of others (e.g., children)
- Pursue a hobby
- Gain on-the-job experience/training
- Fulfill a school assignment or to prepare for a career

# What is Free-Choice Learning?

- John & I suggested term in 1996 which we felt better focuses on nature of learning than where happening & does not trivialize
- Guided by people's needs & interests
- Learning people do throughout lives to find out more about what is useful, compelling or simply of curiosity
- Not a perfect term but has provoked discussion & debate

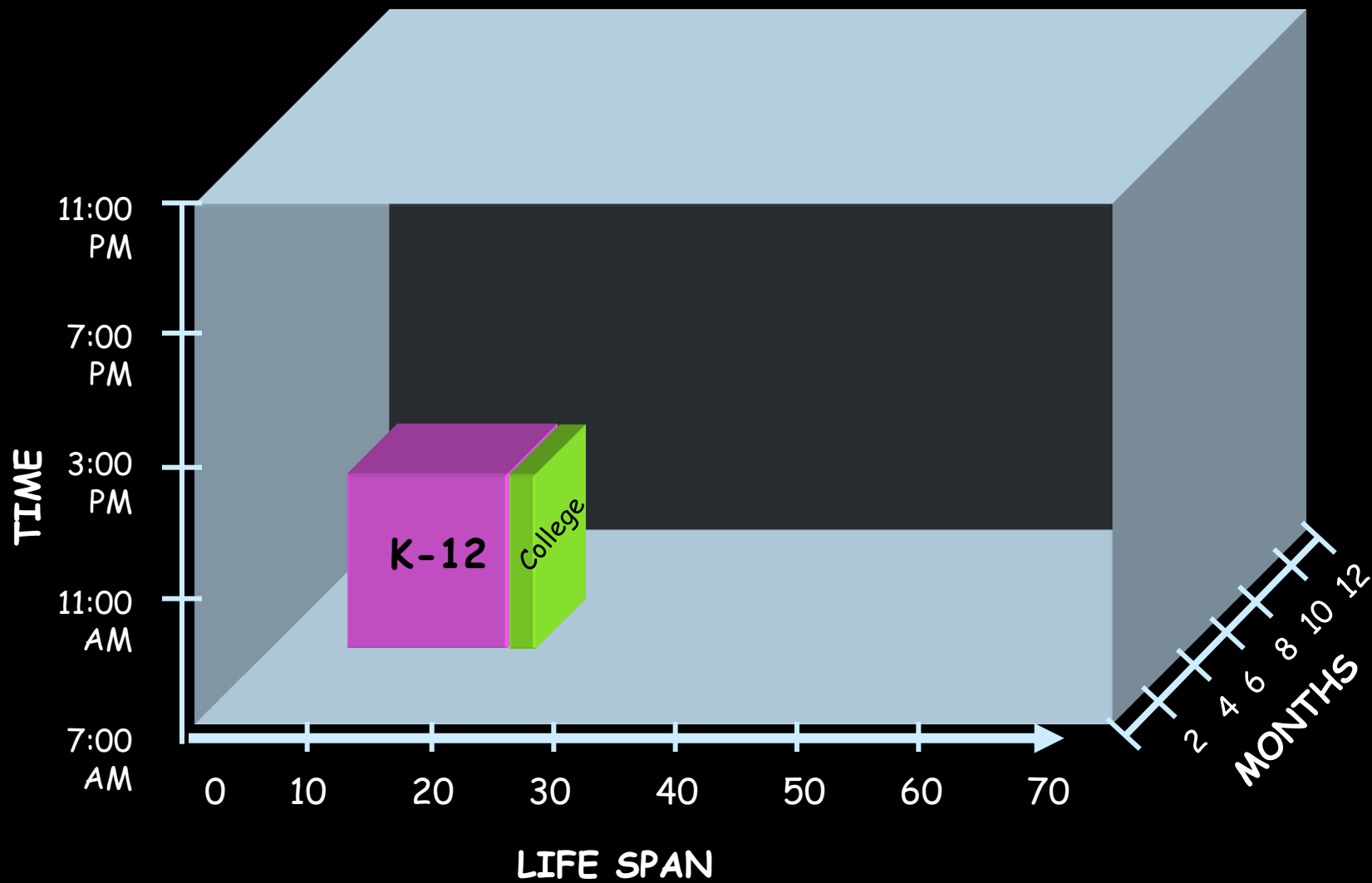




**When Do People Learn?**

# Big Picture

- Learning is lifelong: 24-7-70+
- Less than 3% of life spent in formal instruction
- Traditional gatekeepers of knowledge – schools, libraries, government – no longer in total control
- Boundaries between why, when, where, how, & with whom we learn disappearing
- Learning is continuous & cumulative





**Where Do People Learn?**

# Lifelong Learning Infrastructure



**Learner**

# Lifelong Learning Infrastructure





# Lifelong Learning Infrastructure



# Museums as Resources for Lifelong Learning

- First & foremost, must remember museum-going is a leisure time activity
- Can be rich resources for lifelong learning if recognize visitors use them to meet many needs; only one is learning about content/objects
  - Desire to socialize/affiliate
  - Rejuvenation
  - Explore curiosities
- Whatever the need, visitors value comfortable surroundings & assistance satisfying needs

# Public Value

- Strategic impact *for and with* communities;
- Fully connected to fabric of community & its needs
- Starting from institution's perspective can result in institution *thinking* what community needs is a healthy, vital museum & content they've chosen!
- However, healthy, vital museum is means to achieving public good, but not public good in and of itself

# Being of Value to One's Publics

- Ideal when museum collaborates *with* visitors (and even those not visiting) to identify experiences that are valuable, empowering & meet needs of community, rather than deciding what community needs to know
- But wait, isn't good work of museums a given?
  - Must concretely demonstrate public value for funding & sustainability over time by refocusing & returning to core values & mission
  - Elephant in room: museums may not be as relevant as professionals working in them think

# Planning to Achieve Public Value

How will *community* be different because museum exists?: Reframe activities thru lens of impact *on community*:



- Who is/are primary audience(s)? Why?
- What specific needs or wants *of audience* are being met? How do you know?
- Have “right” people been involved *from outset*?
- How will audience benefit from activities? How will you know?
- How will *community as whole* benefit from activities? How will you know?

**Is there evidence that museums have an impact on their publics?**





# Research Question

What is the relative contributions made to science knowledge by:

- Formal schooling
- Childhood free-choice experiences
- Adult free-choice experiences
- Workplace experiences
- Socioeconomic privilege



Random Telephone Survey of 1,018 L.A. Adults

# Contribution to Science Knowledge

	F Value	P Value	R <sup>2</sup>
<b>Formal Education</b>	133.08	< .001	.17
<b>Childhood Free-Choice Learning Experiences</b>	126.61	< .001	.17
<b>Workplace Experience</b>	152.61	< .001	.20
<b>Privilege</b>	152.95	< .001	.23
<b>Adult Free-Choice Learning Experiences</b>	323.95	< .001	.39
<b>Full Model</b>	369.43	< .001	.51

# International Science Centre Impact Study

Do science centre experiences significantly correlate with increased:

- Knowledge & Understanding of Science & Technology
- Interest & Curiosity in & Engagement with Science & Technology In & Out of School
- Participation in Science & Technology-related Careers & Hobbies
- Perceived Confidence in Science & Technology

Institution	Country	Adult	Youth	Total
Canada Sci. & Tech. Museum	Canada	250	250	500
Heureka	Finland	379	336	715
International Centre for Life	UK	424	384	808
Maloka	Colombia	406	469	875
Frost Museum of Science	USA	256	253	509
MIDE	Mexico	384	384	768
Nat. Museum Natural Science	Taiwan	521	590	1111
National Museum Sci. & Tech.	Sweden	287	319	606
Ontario Science Centre	Canada	250	250	500
Ciência Viva	Portugal	321	319	640
Questacon	Australia	381	278	659
Science Centre Singapore	Singapore	412	333	745
Science North	Canada	385	322	707
Technopolis	Belgium	388	382	770
TELUS Spark	Canada	392	253	645
Universeum	Sweden	258	308	566
VilVite	Norway	395	362	757
TOTAL		6,089	5,792	11,881

# Relationship between Number of Youth Visits in last 12 months and dependent scales

	Never Visited (53%)	0 Visits (24%)	1 Visit (13%)	2-4 Visits (7%)	5+ Visits (2%)	p-value	Eta
Knowledge & Understanding	2.45	2.49	2.57	2.70	2.95	< .001	.16
Interest & Curiosity	0.09	0.09	0.12	0.18	0.08	< .001	.10
Out-of-School Engagement	3.86	3.61	3.84	4.02	4.34	< .001	.11
Vocations	3.63	3.45	3.76	4.08	4.51	< .001	.11
Avocations	3.97	3.63	3.90	4.18	4.48	< .001	.12
Sci. Confidence	--	3.66	3.96	4.22	4.25	< .001	.20

# Relationship between Year of Adult's most recent visit & dependent scales

	Never Visited (54%)	Before 2010 (11%)	2010-2011 (14%)	2012 (14%)	2013 (7%)	p-value	Eta
<b>Knowledge &amp; Understanding</b>	2.32	2.52	2.61	2.62	2.74	< .001	.25
<b>Interest &amp; Curiosity</b>	0.05	0.20	0.22	0.27	0.49	< .001	.14
<b>Out-of-School Engagement</b>	3.77	4.09	4.11	4.34	4.55	< .001	.20
<b>Vocations</b>	3.37	3.21	3.24	3.58	4.01	< .001	.10
<b>Avocations</b>	3.90	3.73	3.86	4.12	4.44	< .001	.11
<b>Sci. Confidence</b>	--	3.71	3.84	3.92	4.32	< .001	.18



# Conclusions

Youth & adults who use science centres are significantly more likely than those who do not to have high levels of:

- Knowledge and Understanding of science & technology;
- Interest and Curiosity in science & technology;
- Engagement with and interest in science as a school subject (youth);
- Engagement with science and technology-related activities out-of-school; and
- Confidence in pursuing science and technology topics

# Knowledge X Education, Income and Interest X Visit/Not Visit

	<u>% Visit</u>	<u>Visit</u>	<u>No Visit</u>
> BA degree	72%	2.72 <sup>a</sup>	2.54 <sup>b</sup>
< BA degree	45%	2.48 <sup>a</sup>	2.25 <sup>b</sup>
> Median Income	54%	2.62 <sup>a</sup>	2.39 <sup>b</sup>
< Median Income	38%	2.55 <sup>a</sup>	2.29 <sup>b</sup>
Really Like	50%	2.81 <sup>a</sup>	2.61 <sup>b</sup>
Like	40%	2.41 <sup>a</sup>	2.27 <sup>b</sup>
Dislike	29%	2.12 <sup>a</sup>	1.86 <sup>b</sup>

# Final Comments

- Evidence strongly supports that visiting a museum increases a wide range of important learning-related outcomes
- There is now strong and compelling evidence that the presence of one or more healthy and active museums within a community, region, or country represents a vital mechanism for creating and/or maintaining an informed, engaged and literate public

**Vielen Dank!**

falkj@science.oregonstate.edu

dierkinl@science.oregonstate.edu