

Planning — for the — **Future**

4–7 September 2016



The Changing Face of Arboricultural Education: *A Global Perspective*



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An Introduction

- Graduate Certificate in Urban Forestry at OSU
- Online courses in Arboriculture, Urban Forestry, Green Infrastructure, and Urban Forestry Leadership
- ISA Board of Directors
- UK ancestry – Wantage and Sudbury





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Presentation Overview

- Arboricultural education is an ever-changing endeavor
- Change is being realized primarily in three contexts:
 - Content
 - Audiences
 - Delivery methods
- Educational programs must adapt to keep up

Change is constant

- Interviews with educators
- Changes evident in:
 - Science
 - Technology
 - Communications
 - Generations





Changing Content

- The science of Arboriculture continues to evolve
- Arborists are integrating with other professionals more than ever before
 - Ecosystem Services
 - Green Infrastructure
 - Collaboration



Job-task analysis based content changes – ISA Certification Exam

DOMAIN	1991	2001	2011	NEW DOMAIN NAME
Nutrition and Fertilization	7.5%	5.5%		Combined into Soil Management
Installation and Establishment	8.5%	9.0%	9.0%	Installation & Establishment
Identification and Selection	5.00%	4.50%	9.0%	Identification and Selection
Tree Biology	13.5%	13.0%	12.0%	Tree Biology
Tree, Soil, Water Relations	9.0%	6.5%	9.0%	Soil Management
Safe Work Practices	11.0%	9.5%	9.0%	Safe Work Practices
Pruning	8.0%	11.0%	12.0%	Pruning
Diagnosis & Treatment	14.5%	12.0%	13.0%	Diagnosis & Treatment
Cabling, Bracing, and L.P.	16.5%	11.0%		Combined into T.P. & T.R.A.
Trees, People, & Ecology	6.5%	3.0%	8.0%	Urban Forestry
Construction Preservation*		7.0%	9.0%	Tree Protection
Tree Risk Assessment**		<u>7.5%</u>	<u>10.0%</u>	Tree Risk Management
	100%	100%	100%	

Changing Audiences

- Students are changing
 - Millennial generation
 - Digital natives
 - Second or third career changers
- Professionals are changing
 - Allied professions
 - Who impacts your trees?



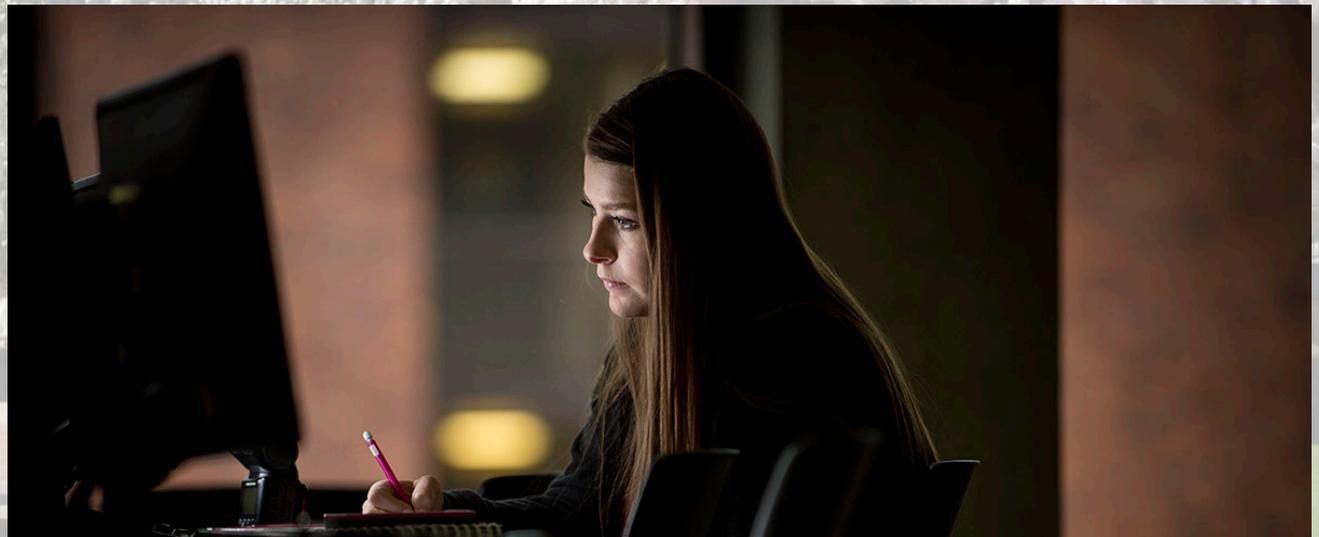
Changing Audiences

- Studies show that there are a variety of learning styles and learner types
- One-size-fits all really fits no one



Changing Delivery Systems

- More students are taking online courses every year
- 74% of UK mobile device owners reported using it for online learning
- Hybrid courses are also gaining in popularity

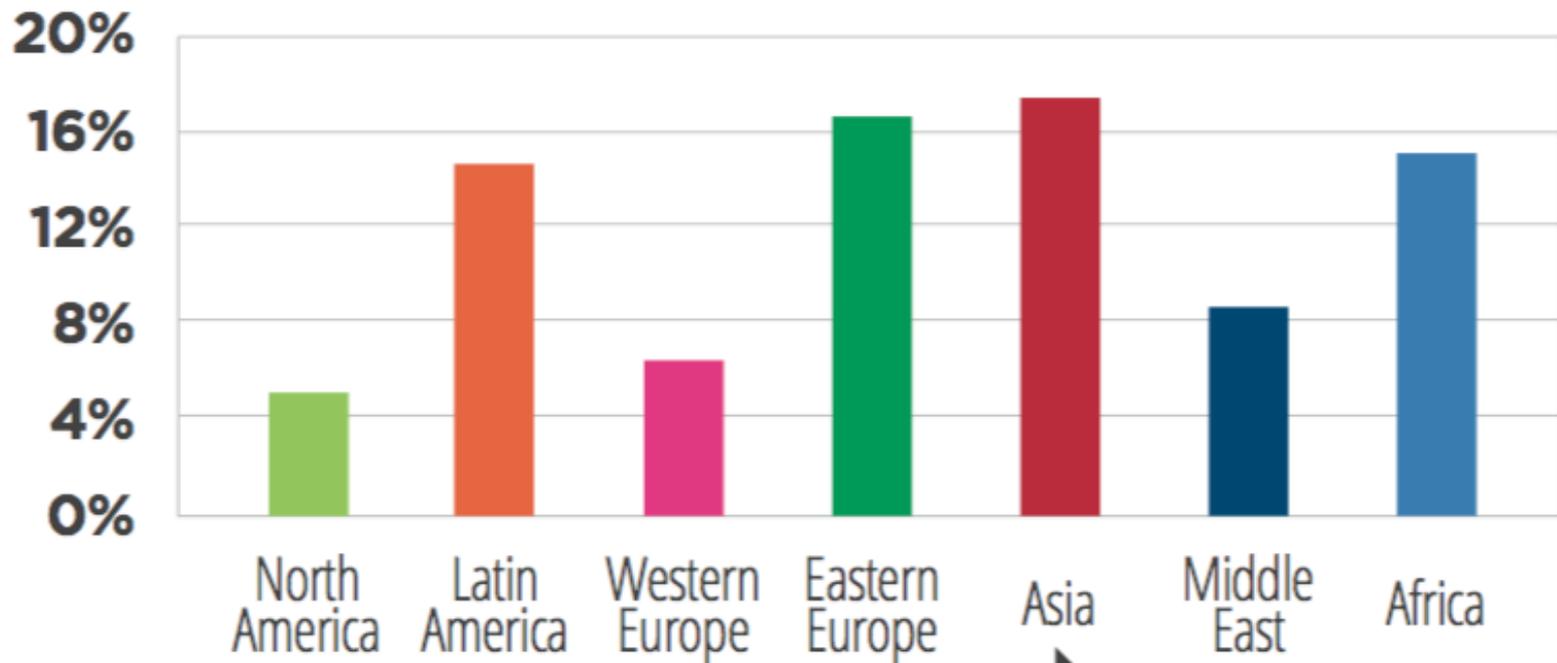


Online or E-learning

- In the US, 5.8 million students took a least one online course last fall
- OSU has 1,000 online courses in 90 different subjects, 20 bachelors programs and 23 graduate level programs
- 74% of UK mobile device owners reported using it for online learning
- ISA now has an online learning center for CEUs in addition to place-based courses

Worldwide Growth of E-Learning

Growth by region



**DRIVEN BY
RUSSIA**

**DRIVEN BY INDIA,
CHINA, AUSTRALIA**

2015 Fastest Growing E-learning markets

- India: 55%
- China: 52%
- Malaysia: 41%
- Romania: 38%
- Poland: 28%
- Czech Republic: 27%
- Brazil: 26%
- Indonesia: 25%
- Colombia: 20%
- Ukraine: 20%

What does this all mean?

- The “sage on the stage” is being joined by the “guide on the side”
- We must adapt our educational programs to changing learners, changing learner styles, and changing learner needs



There is always a “but....”

- Changes in education often involve “adding to” rather than replacing
- High tech will never replace high touch



Take home messages

- Arboricultural education (and urban forestry for that matter) is becoming:
 - More interdisciplinary
 - Full of more diverse learners
 - Characterized by more online learning





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