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Transforming graduate education in the modern 21st century university

Karen P. DePauw, Ph.D.

Vice President & Dean for Graduate Education

Professor, Department of Sociology and

Department of Human Nutrition, Foods & Exercise

AGEP national conference - May 2019



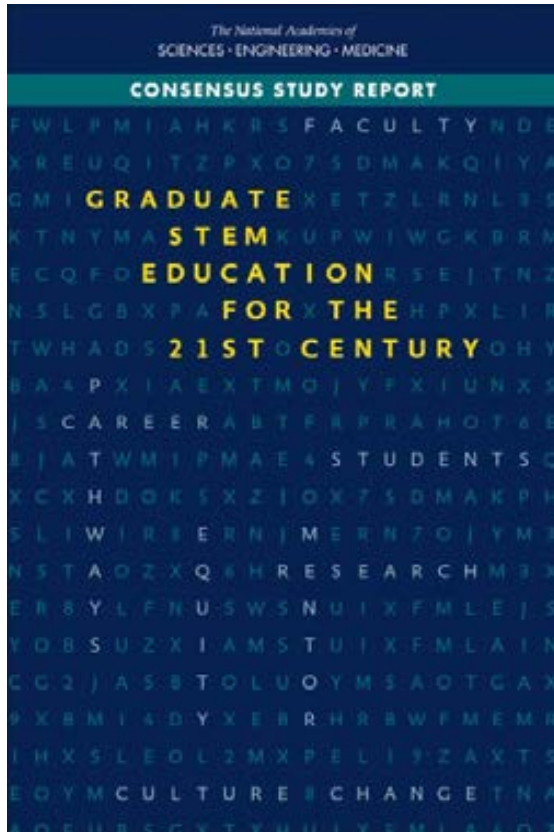
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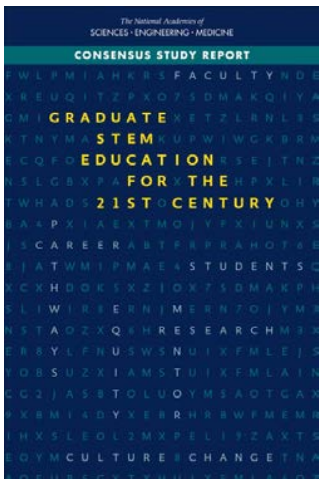
Diverse Pathways in STEM: *Achieving the Dream*

AGEP National Research Meeting
Coeur d'Alene, Idaho • May 19-21, 2019

to achieve the dream,

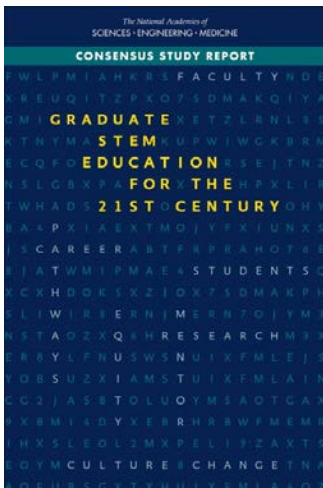


...it would be wise to acknowledge and understand the current and future challenges facing this system (i.e., graduate education) and take steps now to ensure that it remains vital, adaptable, and relevant for many generations to come. To neglect graduate education, or to ignore threats to its success, puts the economic, social, and cultural well-being of the nation at risk. (p. 19, 2018)



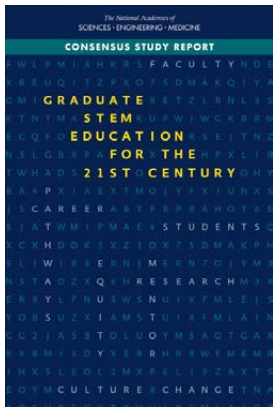
National Academies of Science, Engineering and Medicine 2018

“Importantly, this report also calls for a **shift from** the current system that focuses primarily on the **needs of institutions of higher education** and those of the research enterprise itself to one that is **student centered**, placing greater emphasis and focus on **graduate students as individuals with diverse needs and challenges**. An ideal, student-centered STEM graduate education system would include several attributes that are **currently lacking in many academic institutions**”



ideal graduate education...

- fully accessible transparent data
- technical literacy including ethical issues
- inclusive and equitable learning environment; mental wellness, work-life balance
- different perspectives - interdisciplinary
- communication skills
- individualized project based learning and transferable skills (**not soft skills**)



- professional development for multiple careers
- communication between students and administration including advocacy
- course offerings for careers options
- faculty mentoring and advising for graduate students
- training programs and rewards for faculty

Recommendation #3 Ensuring Diverse, Equitable, and Inclusive Environments (NASEM, 2018)

The graduate education enterprise should enable students of all backgrounds—including but not limited to racial and ethnic background, gender, stage of life, culture, socioeconomic status, disability, sexual orientation, gender identity, and nationality—to succeed, by implementing practices that create an equitable and inclusive institutional environment.

**Innovative + Inclusive + Interdisciplinary
= Transformative (3 I's = T)**



Transformative graduate education (TGE)

Transforming graduate education in the modern 21st century university

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**a journey into the 21st century
university...**

If lasting institutional reform is to be achieved, it will require **changes in graduate education**, with greater emphasis upon the **integration of disciplines** and their applications to **societal issues**. Preparation for **leadership** should be a part of graduate education....

James Duderstadt, 2000

rethinking and re-imagining graduate education....

**...rethinking and re-imagining the
Graduate School (college) and the role of
the Graduate Dean**

**building a new culture with new
meaningful and relevant programs**

**excellence through inclusion and
diversity**



21st century global university

- interdisciplinary and integrative
- forward thinking
- adaptive, innovative and agile,
- transformative, and
- inclusive

VT Graduate School and Graduate Life Center



a space and place for graduate education

**Graduate education at VT today isn't
what is used to be**

And that's a good thing!





Transforming graduate education through initiatives and programs

the role of the Graduate School

Graduate school....

- **must be responsive, integrative, interactive, inclusive & innovative**
- **must provide a space and place for graduate education**
- **incorporates building academic communities**
- **has power to convene**
- **has responsibility for change**
- **must be strategic and lead transformation**

- **complement and expand upon traditional academic training in the disciplines**
- **promote interdisciplinary graduate education**
- **create affirming, inclusive graduate community**
- **provide career development and ‘success critical skills’ development (e.g., future professoriate, career professional)**

- **incentives (certificates, academic credit)**
- **commitment of time by Dean**
- **utilize resources within Graduate School;
share and sustain resources**
- **dynamic and evolving programs;
meaningful and relevant**
- **safe and brave space**

Transformative Graduate Education (TGE)



DePauw 2003 (rev 2017)

Technology, inclusion & diversity, interdisciplinary, ethics, & global



Graduate Courses & Certificates

- **Preparing the Future Professoriate (3)***
- **PFP: Global Perspectives (3)**
- **GTA Workshop (1)**
- **Contemporary Pedagogy (3)***
- **Library Research Skills (1-2)**
- **Citizen Scholar Seminar (3)**
- **Ethics and Scholarly Integrity (2)**
- **Study Abroad - GPP (3)**
- **Preparing Future Career Professional (3)**
- **Industrial Professional in Science & Engineering (3)**
- **Diversity & inclusion for a global society (3)**
- **Communicating Science (2)**
- **International Research (3)**
- **Interdisciplinary Research & Graduate Education (1-3)**

Q27: How well prepared do you feel for whatever you are doing next in your career or academic pursuits?

- 75% of students participated in TGE initiatives feel extremely well, or very well prepared**
- 79% of students received the PFP certificate feel extremely well, or very well prepared**
- 68% of students not participate in GRAD courses feel extremely well, or very well prepared**

Certificates

- **Future Professoriate graduate certificate (700+)**
- **Inclusion and diversity graduate certificate**
- **Career professional graduate certificate**

Curricular content

- **Ethics and scholarly integrity requirement**
- **Inclusion and diversity requirement**

Micro-credentials

Workshops and seminars

- **Writing skills**
- **Team building**
- **Time management**
- **Communication**
- **Work-life balance**
- **Inclusive pedagogy**
- **Privilege and bias**
- **Grant writing**
- **Job preparation**
- **Leadership**
- **Entrepreneurship**
- **and more**

Preparing the future professoriate: Global perspectives program (GPP)



Since 2006 14 + 4 programs (Switzerland,
Chile, Ecuador)

200+ participants

8 summits at Swiss Embassy

8+ web published manuals

Global Seminar participants & Swiss Embassy



Global Perspectives Program (GPP: Switzerland): selected themes

- Higher education as public good: the global landscape
- Global higher education: accountability & relevance
- EU 'modernizing' higher education 2020+
- Reforming doctoral education
- Access to and within higher education
- University and society: meeting expectations?
- Future of higher education: preparing for change
- Global graduate education
- PhD education in Europe and U.S.

Preparing future professoriate: global perspectives

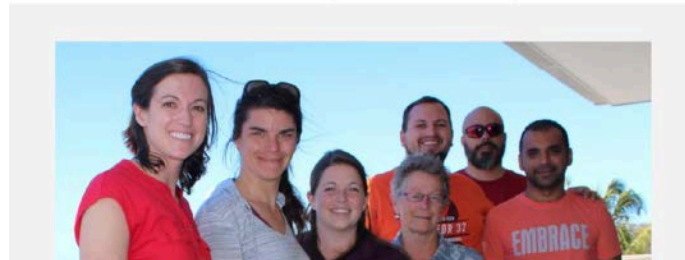
GPP Chile

Info About and From Chile



Graduate school's Global Perspectives Program expands to Ecuador

January 18, 2017



Follow Virginia Tech



Top News



The meaning of global

Posted on February 26, 2012 by Karen DePauw



and 21st century faculty initiative



2016



2017



2018

Transformative Graduate Education (TGE)

Knowledge



Scholarly
Inquiry

Interdisciplinary/Transdisciplinary

learning, unlearning and relearning across disciplines

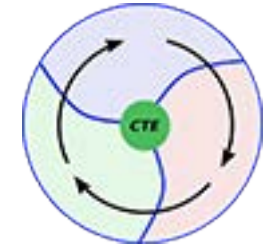
Rhoten, D. 2004. Interdisciplinary Research: Trend Transition.
Items and Issues 5, no. (1-2):6-11.

21st century

'grand' challenges

beyond a single discipline

Interdisciplinary Graduate Education Programs

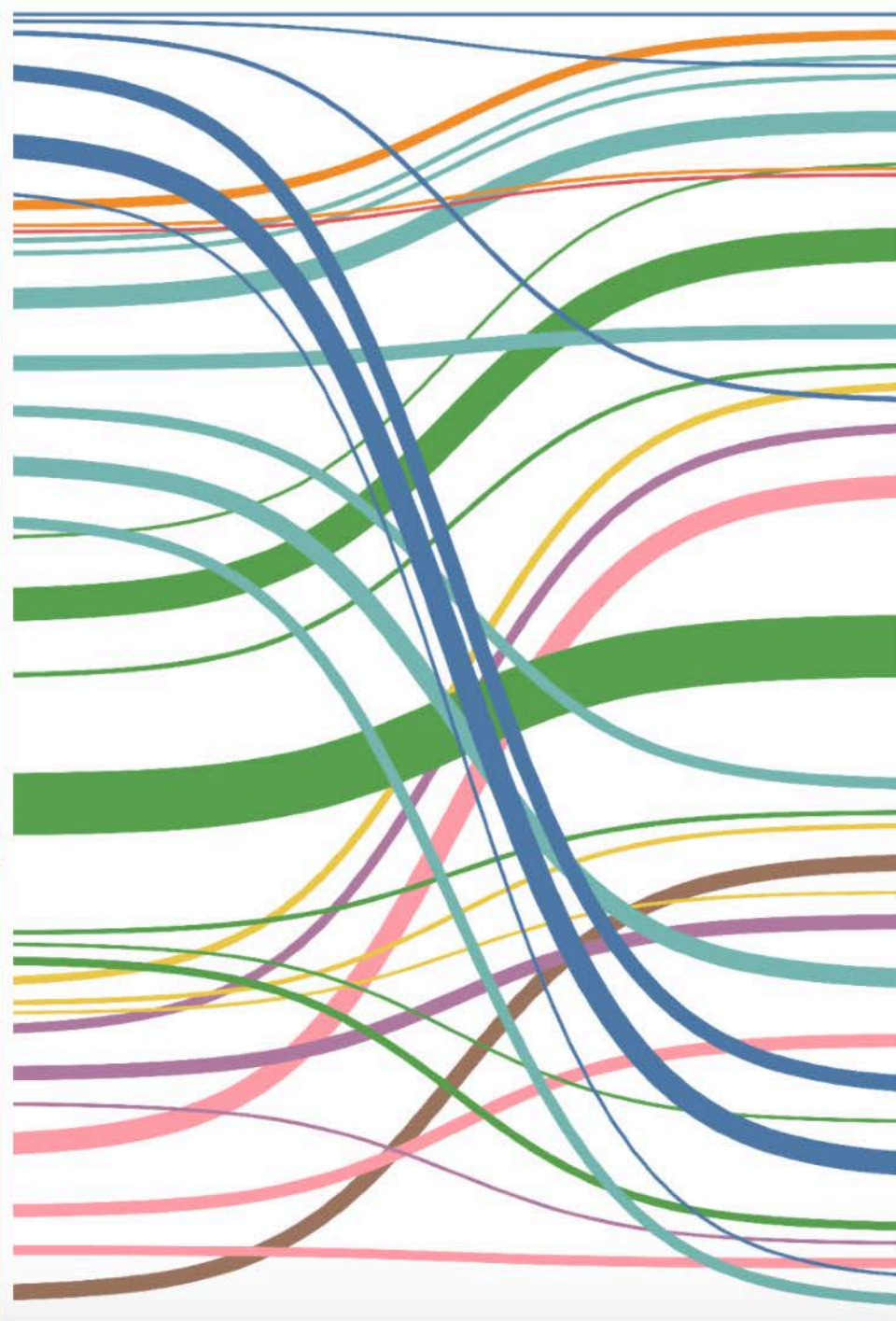
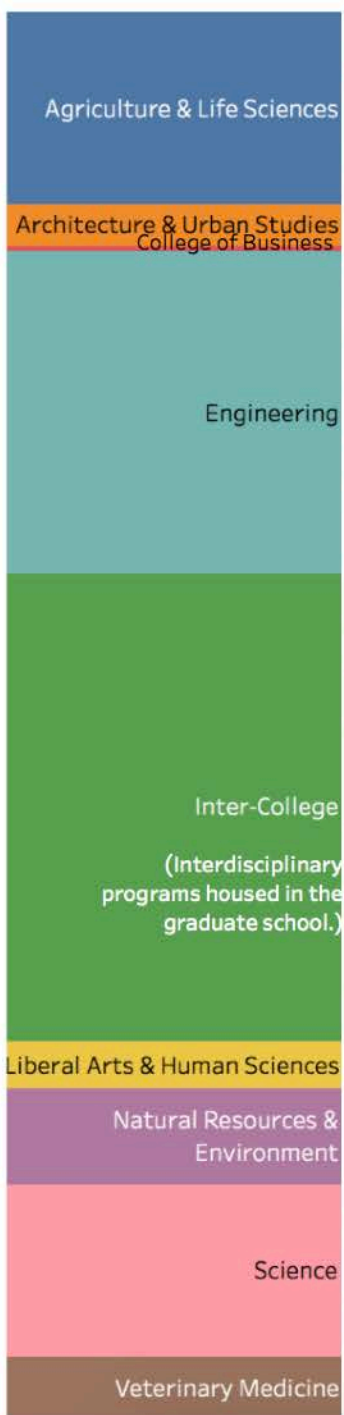


14 IGEPs
~325 students
~270 faculty

iPhD = 7+



Primary Major College



Interdisciplinary Graduate Education Program

Interdisciplinary thinking (iThinking)

DePauw, K.P. (2015) <https://blogs.lt.vt.edu/kpdtge/index.php/2015/08/06/interdisciplinary-thinking/>

Interdisciplinary Skills (Repko, 2008)

Ability to

- communicate
- think abstractly
- think dialectically
- engage in nonlinear thinking
- think creatively
- think holistically

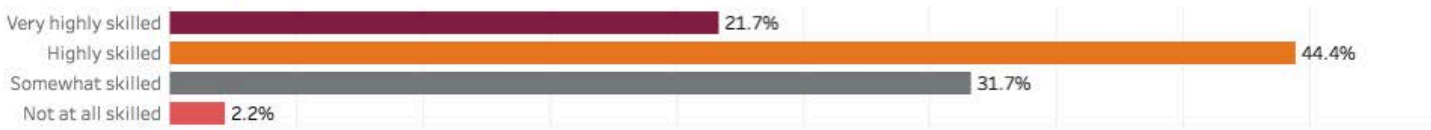
Communicate Completely



Think abstractly



Think Dialectically



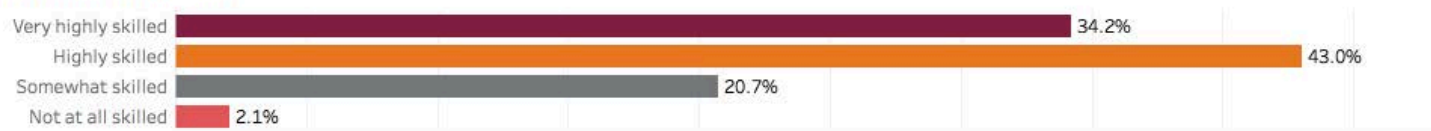
Engage in nonlinear thinking



Think Creatively



Think Holistically



Traits for interdisciplinary thinking (Repko, 2008)

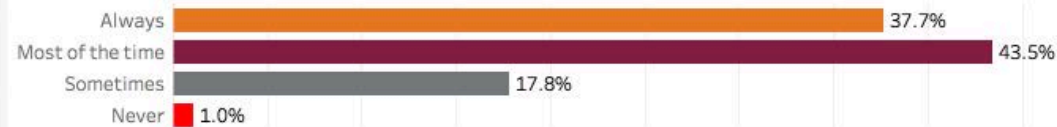
Enterprise



Love of Learning



Reflection



Tolerance for ambiguity and paradox in the midst of complexity



Receptivity to other disciplines and to the perspectives of those disciplines



Willingness to achieve "adequacy" in multiple disciplines



Appreciation of Diversity



Humility



Transformative Graduate Education (TGE)

Leadership





Graduate Student Assembly

Virginia Tech Graduate Student Assembly



[ABOUT US](#) ▾

[GSA NATIONAL CAPITAL REGION](#)

[GRADUATE RESEARCH SYMPOSIUM](#) ▾

[GRADUATE AND PROFESSIONAL SCHOOL FAIR](#)

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[GRADUATE-UNDERGRADUATE
MENTORSHIP PROGRAM](#)

Search ...



WELCOME TO THE WEBSITE
FOR THE VIRGINIA TECH
GRADUATE STUDENT
ASSEMBLY



Interdisciplinary Research Honor Society (IDR) at VT



- Our mission is to promote and recognize interdisciplinary research at VT and throughout the United States.
- Faculty advised by Dean DePauw
- We have several events:
 - ▣ IDR day – a day of discussion and group project work
 - ▣ IDR Symposium (this coming Fall)
 - ▣ Socials and Society meetings
- Membership:
 - ▣ IDR Honor Society Members
 - Application deadline:
 - GPA requirement: 3.7
 - ▣ IDR Honor Society Associate Members
 - ▣ IDR Society Members

GO to www.idrsociety.org !

Alpha Epsilon Lambda (AEL)

The Alpha XI Chapter of **Alpha Epsilon Lambda**
The honor society of graduate and professional school students



Overview
Officers and Advisor
Members
Activities & Programs
Constitution
Application Process
National AEL



Virginia Tech Board of Visitors Graduate Representative University

Like Follow Message

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144 people like this

Post

Transformative Graduate Education (TGE)



Social Responsibility

Spring 2016 Business meeting - April 8th - academyforGTA-g@vt.edu. To view this discussion on the we...

Reminder: Production & Social - acad... @vt.edu. To view this discuss... web visit ht...

2016 Conference on Teaching Large Classes at Virginia Tech - academyforGTA-g@vt.edu. To view this discussion c...

Academy membership selection - academyforGTA-g@vt.edu. To view this discussion on the web visit https://grou...

Tomorrow: Academy Meeting - this Thursday - academyforGTA-g@vt.edu. To view this discussion on the web visit...

Today: Webinar - The State of Graduate Education - academyforGTA-g@vt.edu. To view this discussion on the we...

2016 POD Network Conference Call for Proposals - academyforGTA-g@vt.edu. To view this discussion on the web...

Reminder: Academy Meeting - this Thursday - academyforGTA-g@vt.edu. To view this discussion on the web visit...

Webinar - The State of Graduate Education - academyforGTA-g@vt.edu. To view this discussion on the web visit h...

Discuss Pedagogy

The VT Graduate Academy for Teaching Excellence serves as a community hub for graduate students who are interested in teaching to connect with each other as well as faculty, staff, and other campus resources.

Slow Scholarship and Building Community to Thrive in Graduate School

COMMONS

OPEN EDUCATIONAL RESOURCES

Pedagogy Resource Repository

The VT Graduate Academy for Teaching Excellence hosts a wealth of pedagogical resources that may help one improve their teaching.



Service Work

The VT Graduate Academy for Teaching Excellence provides service to the campus and broader community by providing some human, technical, and other resources in support of teaching and improving one's pedagogy.

Research and Funding

This blog post is in part processing a few research thoughts and working on research statements for my Feminist Research Methods course. Last week was Grad Ed Week at Tech. Part of what that brought

Citizen Scholar Engagement



Citizen Scholar Program

Requirements

Current Citizen Scholars

Past Citizen Scholars

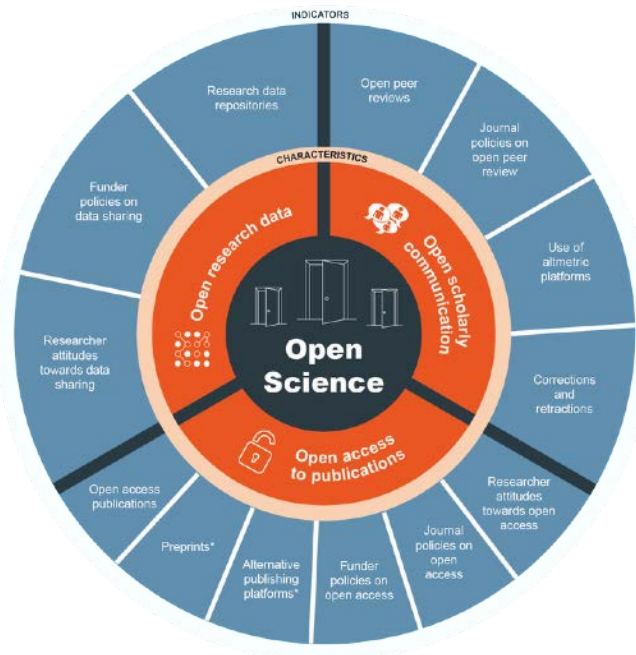
Contacts

Vice President and Dean for
Graduate Education Karen P.

DePauw

540-231-7581

application of knowledge for a global society



WHAT IS CITIZEN SCIENCE?

Citizen science occurs when ordinary people like you help to conduct real scientific research. By participating in citizen science projects, you can contribute to our understanding of our world and make it a much better place.

You don't have to have an advanced degree to contribute, and it's something you can do in your spare time. Check out a few of the amazing results of citizen science projects below, and learn how you can join in the fun!

DATA



50 million classifications were received by the Galaxy Zoo project in its first year, contributed by more than 150,000 people!

PAPERS



More than 60 scientific papers have used Cornell Lab citizen science data collected by bird watchers since 1997.

DISCOVERIES



Foldit players discovered the structure of a protein-cutting enzyme produced by an AIDS-like virus in monkeys...in just three weeks.

A FEW WAYS YOU CAN PARTICIPATE:



Donating money: The easiest way to contribute to a project is to give money via a crowdfunding site like PledgeMusic or directly to a project, like Monarch Watch.



Get and forget: Another easy way to be a citizen scientist is to install a program called SCIENCE on your computer and let it crunch data while you write your emails.



Web-based: Way more fun is actually doing the science yourself: you can listen to bird calls at Bird Detective, or sift through ocean images at Subsea Observers.



"There are a lot of smart, educated, thinking people who are not in the tenure track who have a lot to contribute to the world."

- Jessica Richman, uBiome

WHAT DO I GET OUT OF IT?

An education! Learn about your favorite topics in depth while contributing.

Fun! You never know what you might find.

A sense of purpose—Online games and reality TV are great for winding down, citizen science projects provide a way to put your spare time to use in a meaningful way.

FIND OUT MORE AT:

WWW.CITIZENSCIENCECENTER.COM

"Open" movement and accessibility



GRADUATE SCHOOL
VIRGINIA TECH.

Communicating Science

Graduate students share their experiences with Communicating Science classes in the short video below.



Nutshell games, courses, workshops and more

Transformative Graduate Education (TGE)



Social Responsibility
Access and inclusive

Inclusion and diversity

- with inclusion we can be diverse
- with diversity we might not be inclusive

Inclusion is

- active, intentional and ongoing engagement with diversity in the curriculum and community
- changing the culture so that individuals could be and are included
- choices and having choice
- empowering communities

Graduate School Inclusion & diversity initiatives

Holistic admission

Inclusive GLC - Health & wellness in Rm G

Inclusion and Diversity requirement

Creating affirming environments

Disrupting Academic Bullying

Climate survey

Post admissions services survey

Work life grants

Holistic admissions

- Discontinue practice GPA and / or GRE scores as primary criteria
- Use of additional criteria in support of holistic admission

Additional questions on application

Additional Educational Experiences

Which of the following have you had experiences in? (select all that apply):

- Community involvement and/or service

Explain:

- Leadership

Explain:

- Overcoming social, economic, or physical barriers

Explain:

- Personal and/or professional ethics

Explain:

- Recognition of achievements over time

Explain:

- Research/scholarship

Explain:

- Additional Experience

Explain:

Additional questions for letters of recommendation

If available, provide the applicant's relative standing in your department:

How would you rate this applicant in:

Communication skills: Very strong Strong Average Needs improvement Unable to evaluate

Ethics & Integrity: Very strong Strong Average Needs improvement Unable to evaluate

Initiative: Very strong Strong Average Needs improvement Unable to evaluate

Innovation & Creativity: Very strong Strong Average Needs improvement Unable to evaluate

Planning & Organization: Very strong Strong Average Needs improvement Unable to evaluate

Teamwork: Very strong Strong Average Needs improvement Unable to evaluate

Curiosity: Very strong Strong Average Needs improvement Unable to evaluate

Which two of the above attributes best characterize this applicant?

1. 2.

Please provide the most compelling reason for Virginia Tech to admit this applicant and explain your reasoning.

Graduate School Inclusion & diversity initiatives

Holistic admission

Inclusive GLC - Health & wellness in Rm G

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Little Hokie™ Hangout:
Cooperative Play
Group

Little Hokie™ Hangout is a parent-run cooperative playgroup for children between



Babysitter
Clearinghouse

The Graduate School's Babysitter Clearinghouse is a frequently updated list of qualified babysitters



Parent Support Group

Graduate students who are juggling family and their academic work meet monthly to discuss issues, connect with other parents, and



Photo taken by John McCormick

Connect lunches: Black, Women, Native/Indigenous people, over 30, LGBTQ, Latino/a, FirstGen, Disability caucus and more



**Office of
Recruitment,
Diversity and
Inclusion (ORDI)
@VT_ORDI**

**Diversity scholars and spotlight
HBCU/MSI Research Summit**



changing the rhetoric and reality of graduate education

imposter syndrome, perfectionism

work-life balance

from surviving.....

thriving

31 Tips for Thriving in Graduate School



Twitter, email, storify, FaceBook, LinkedIn, website



GRADUATE SCHOOL
VIRGINIA TECH.

Disrupting Academic Bullying

To maintain a culture of civility throughout the graduate education experience, academic bullying is unacceptable and should not be tolerated.

Forms of bullying include:

- Incivility (rude)
- Subtle or overt discriminatory behaviors including micro-aggressions
- Intimidation
- Public humiliation
- Shouting
- Belittlement
- Eye rolling
- Unwarranted/unprofessional remarks

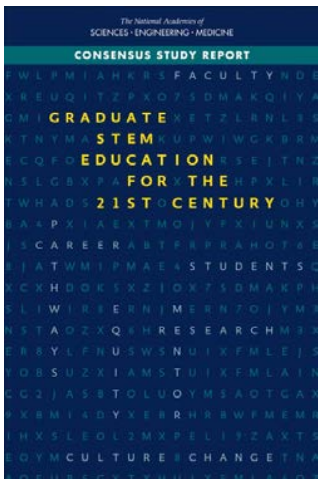
Examples of Academic bullying

- Disregarding or ignoring contributions
- Undermining authority or responsibility
- Withholding information
- Assigning and expecting unreasonable workload
- Disallowing vacation time or personal time
- Limiting professional choice and choices
- Exclusion from relevant meetings
- Continual threats of dismissal or intimidation
- Attempts to destroy or harm the person's self-esteem or confidence
- Constant negative remarks or repeated criticism or sarcasm



21st century global university

- interdisciplinary and integrative
- forward thinking
- adaptive, innovative and agile,
- transformative, and
- inclusive



National Academies of Science, Engineering and Medicine 2018

“Importantly, this report also calls for a **shift from** the current system that focuses primarily on the **needs of institutions of higher education** and those of the research enterprise itself to one that is **student centered**, placing greater emphasis and focus on **graduate students as individuals with diverse needs and challenges**. An ideal, student-centered STEM graduate education system would include several attributes that are **currently lacking in many academic institutions**”

Transformative Graduate Education (TGE)



DePauw 2003 (rev 2017)

Technology, inclusion & diversity, interdisciplinary, ethics, & global



“I suppose it is tempting, that if the only tool you have is a hammer, to treat everything like a nail”

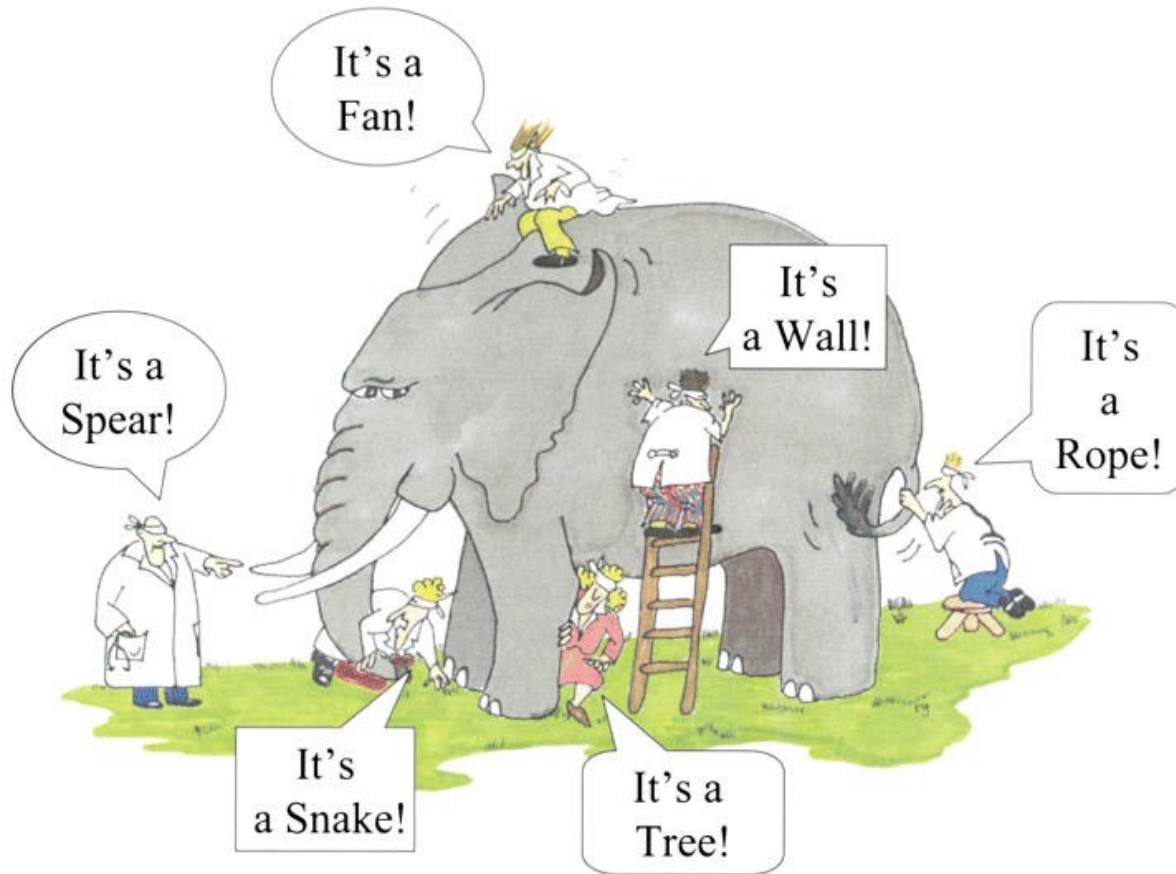
Abraham Maslow, 1966

expand the tools

enlarge the tool box

21st century global university

- seeing the whole from different perspectives
- seeing things differently
- looking for the unobvious





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seeing the 'unobvious'



see things differently and look for the 'unobvious'

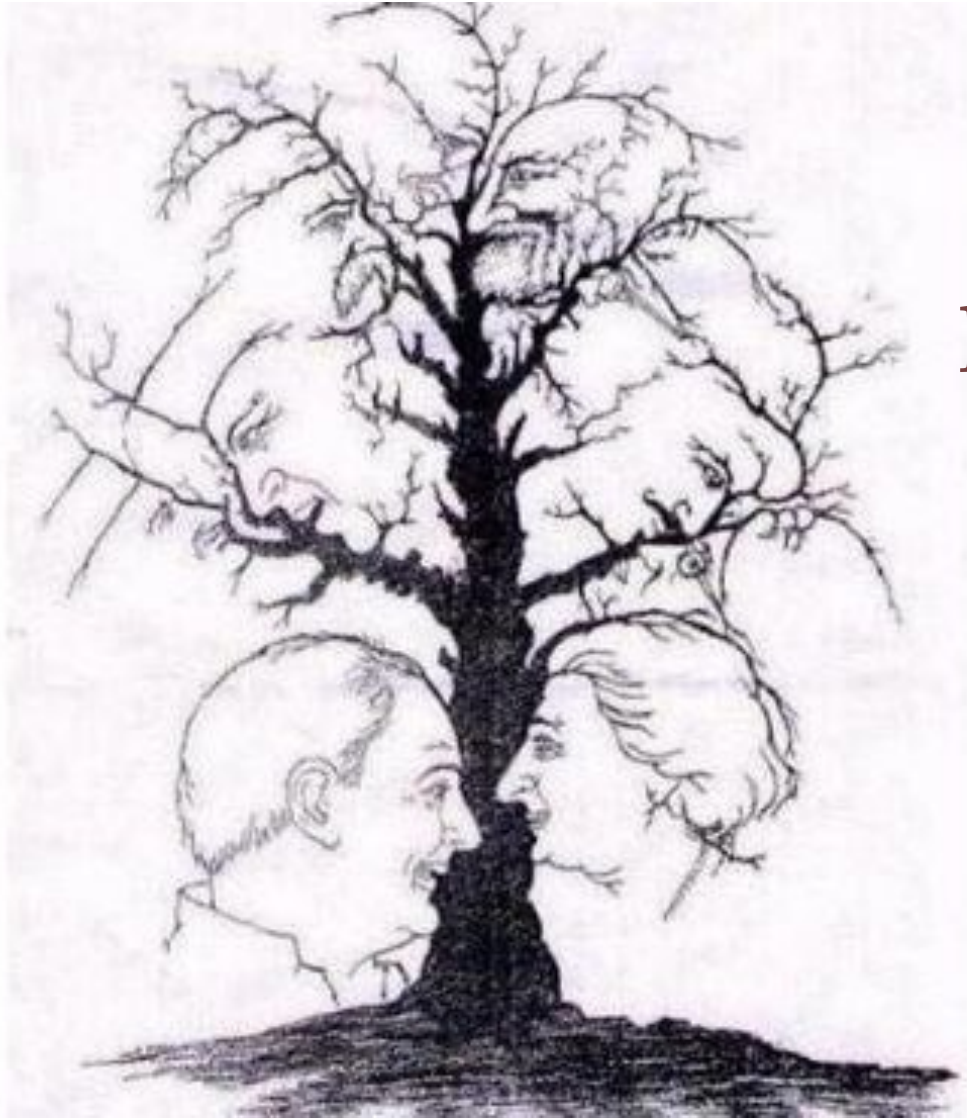


Hope for African
Children Initiative



yoga australia

see things differently and look for the 'unobvious'



how many faces?

looking for the unobvious



21st century modern university...

...futuristic

.... risk

....futurisktic

Transforming graduate education

**Innovative + Inclusive + Interdisciplinary
= Transformative (3 I's = T)**

A suggestion...

- Partnership with the Graduate School
- Secure Graduate Dean's commitment to 3 I's = T (Transforming graduate education)

2019 Graduate Education Summer Conference



Building Graduate Community and a Culture of Inclusion

Conference dates:

June 19-20, 2019

Program to start at 10:00am on June 19 with welcome and introductions, followed by a keynote at 10:30am; conference to conclude at about 3:00pm on June 20.



gradconference@vt.edu

Thank you



a space and place for graduate education



Questions?