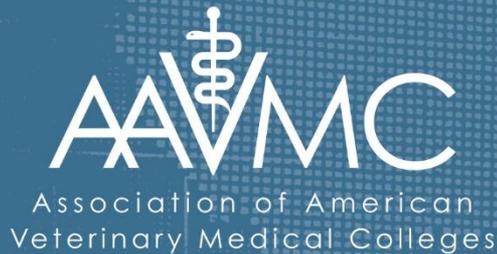


Core Competencies in Veterinary Medical Education

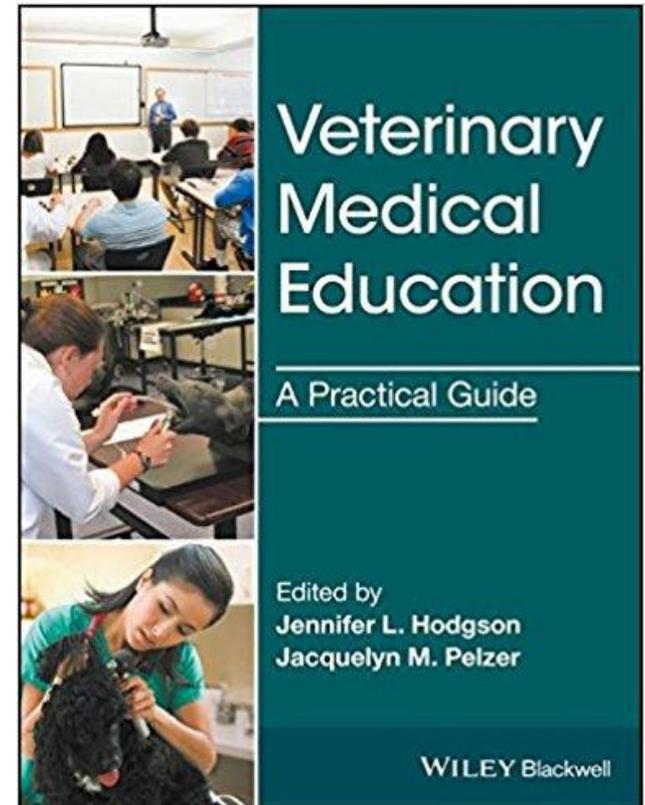
How to make a veterinarian



Andrew T. Maccabe, DVM, MPH, JD
Chief Executive Officer

EAEVE Educational Programme
19 May 2017
London

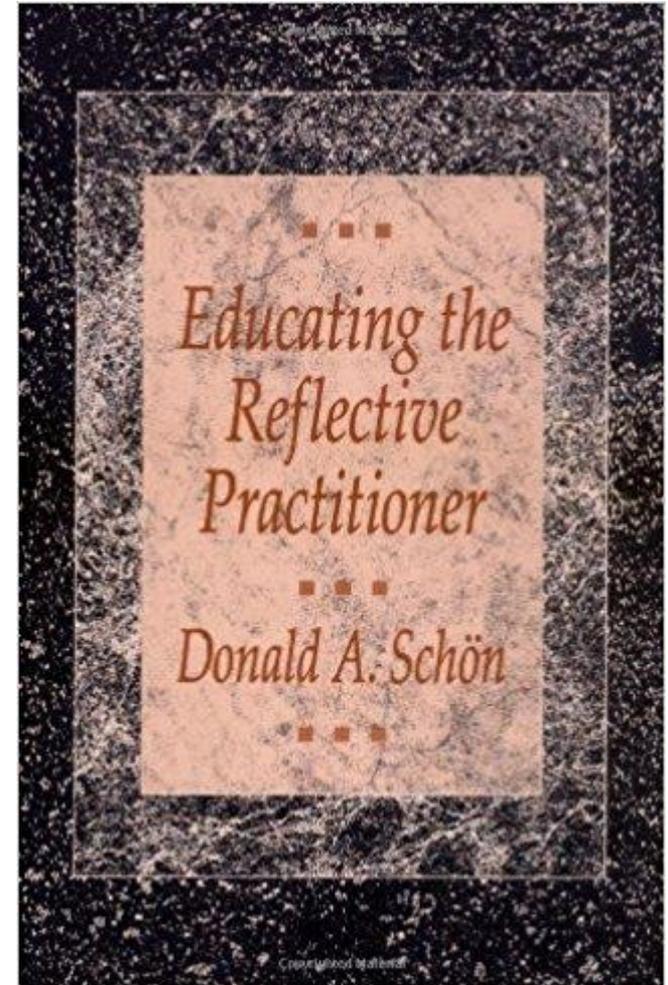
- What are the core competencies?
- Why should we care about them?
- How will this foster innovation?



Ch. 2, “Competency-Based Education” by
Harold G.J. Bok and A. Debbie C. Jaarsma

In return for access to their extraordinary knowledge in matters of great human importance, society has granted professionals a mandate for control in their fields of specialization, a high degree of autonomy in their practice, and a license to determine who shall assume the mantle of professional authority

Donald Schon, *Educating the Reflective Practitioner* (1987)

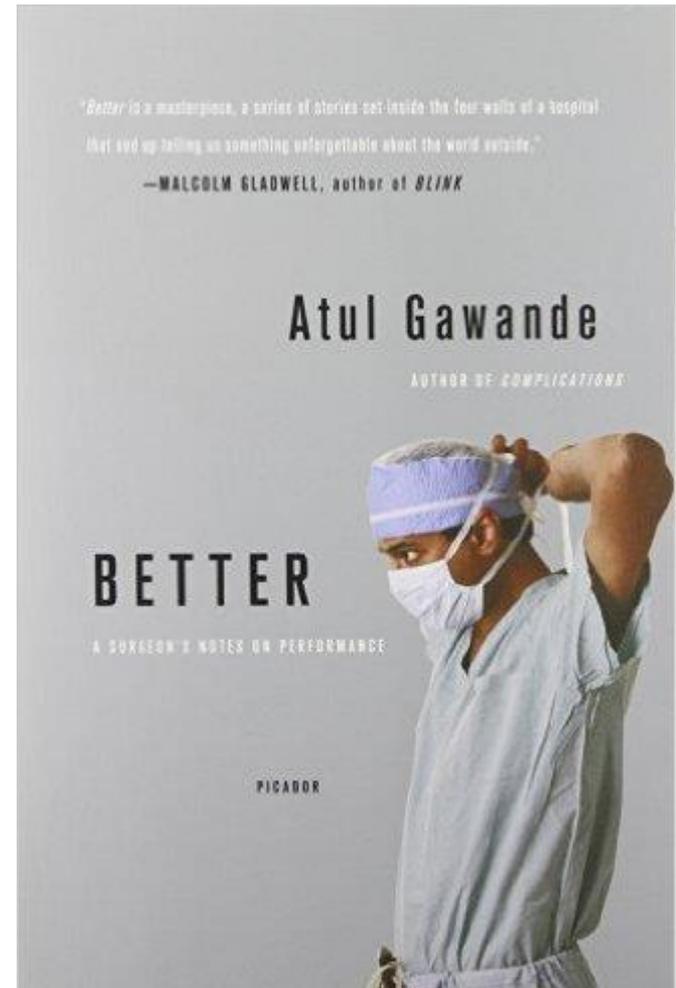




The Grand Bargain

The public has granted us extraordinary and exclusive dispensation to administer drugs to people, even to the point of unconsciousness, to cut them open, to do what would otherwise be considered assault, because we do so on their behalf – to save their lives and provide them comfort.

Atul Gawande, *Better* (2007)





Competence-based training and Assessment

“The intended output of a competency-based program is a health professional who can practice medicine at a defined level of proficiency, in accord with local conditions, with local needs”

- McGahie, W. C., *et al* (1978)

“Competency-based education is an approach to preparing professionals for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.

- Frank, J.R., *et al* (2010)

“Follow the money”

Higher Education Act

- Controls federal financial aid
- Directs USDE to require accrediting agencies to include outcomes assessment

Council on Education

- Recognized by USDE
- Jointly supported by AVMA and AAVMC



Council on Education Standard 11, Outcomes Assessment

Outcomes assessment measures that address the college mission must be developed and implemented. Outcomes assessment results must be used to improve the college programs.

Approved June 2002



Council on Education Standard 11, Outcomes Assessment

~~Outcomes assessment measures that address the college mission must be developed and implemented. Outcomes assessment results must be used to improve the college programs.~~

~~*Approved June 2002*~~

Outcomes of the DVM program must be measured, analyzed, and considered to improve the program. Student achievement during the pre-clinical and clinical curriculum and after graduation must be included in outcome assessment.

Veterinary graduates must have the basic scientific knowledge, skills, and values to provide entry-level health care, independently, at the time of graduation. At a minimum, graduates must be competent in providing entry-level health care for a variety of animal species.

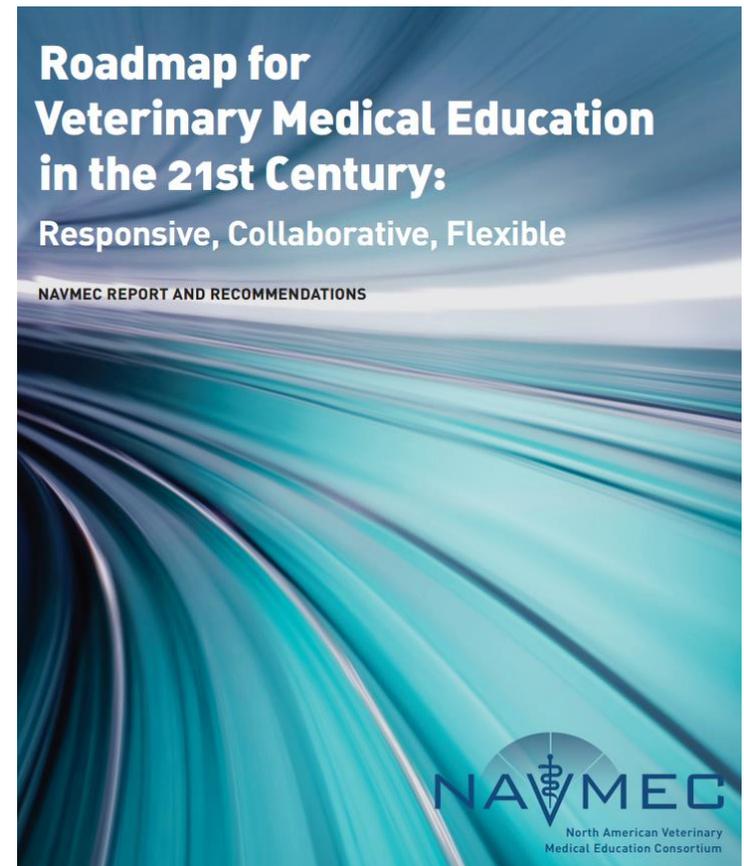
Approved September 2011



Council on Education Standard 11, Outcomes Assessment

1. Comprehensive patient diagnosis (problem solving skills), appropriate use of diagnostic testing, and record management
2. Comprehensive treatment planning including patient referral when indicated
3. Anesthesia and pain management, patient welfare
4. Basic surgery skills and case management
5. Basic medicine skills and case management
6. Emergency and intensive care case management
7. Understanding of health promotion and biosecurity, prevention and control of disease including zoonoses and principles of food safety
8. Client communications and ethical conduct
9. Critical analysis of new information and research findings relevant to veterinary medicine.

1. Multispecies knowledge plus clinical competency in one or more species or disciplines
2. One Health knowledge (animal, human and environmental health)
3. Communication
4. Collaboration
5. Management (self, team, system)
6. Lifelong learning, scholarship, value of research
7. Leadership
8. Diversity and multicultural awareness
9. Adapt to changing environments



1. Veterinary expertise
2. Communication
3. Collaboration
4. Entrepreneurship
5. Health and welfare
6. Scholarship
7. Personal development



Bok, GJ, et al. Development and validation of a competency framework for veterinarians. *J Vet Med Ed*, 2011, 38, 3: 262-269



Core Competencies for Interprofessional Collaborative Practice

Sponsored by the Interprofessional Education Collaborative*



Report of an Expert Panel
May 2011

*IPEC sponsors:
American Association of Colleges of Nursing
American Association of Colleges of Osteopathic Medicine
American Association of Colleges of Pharmacy
American Dental Education Association
Association of American Medical Colleges
Association of Schools of Public Health

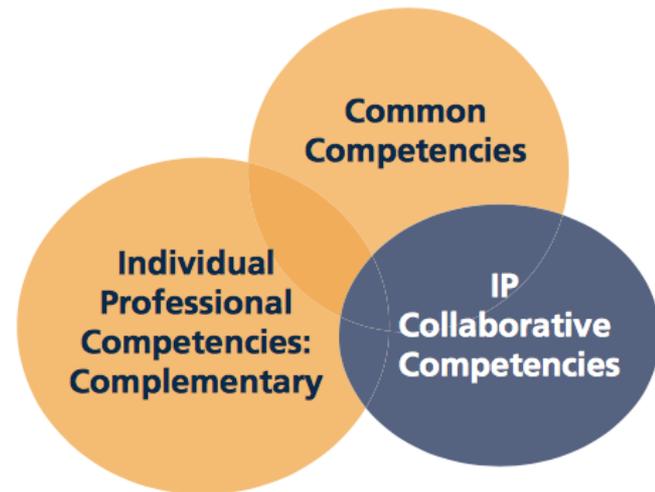
Competency Domain 1: Values/Ethics for Interprofessional Practice

Competency Domain 2: Roles/Responsibilities

Competency Domain 3: Interprofessional Communication

Competency Domain 4: Teams and Teamwork

FIGURE 4: Barr's (1998) three types of professional competencies



- **Values and ethics for interprofessional practice**
 - Work with individuals of other professions to maintain a climate of mutual respect and shared values
- **Roles and responsibilities**
 - Use the knowledge of one's own role and those of other professions to assess and address healthcare needs
- **Interprofessional communication**
 - Communicate with patients, families, communities and other health professionals in a responsive and responsible manner
- **Teams and teamwork**
 - Apply the principles of team dynamics to perform effectively in different team roles to plan and deliver healthcare that is safe, timely, efficient, effective and equitable

1. Epidemiology
2. Transboundary animal diseases
3. Zoonoses, including foodborne diseases
4. Emerging and re-emerging diseases
5. Disease prevention and control
6. Food hygiene
7. Veterinary products
8. Animal welfare
9. Veterinary legislation and ethics
10. General certification procedures
11. Communication skills



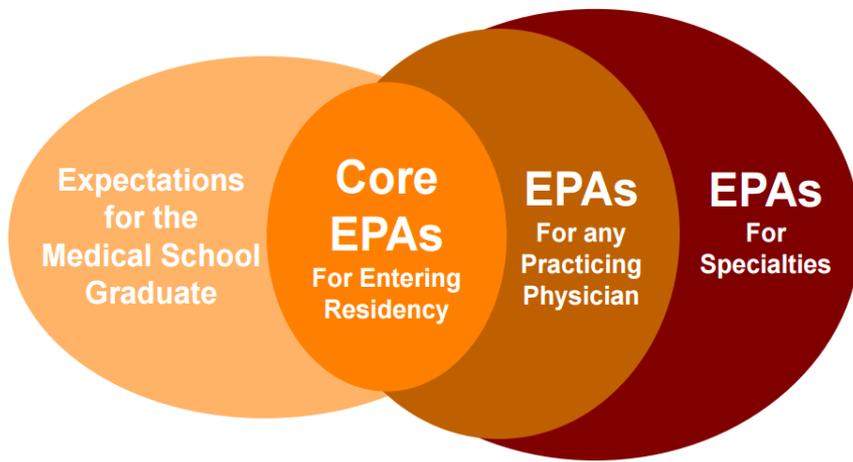


AAVMC Working Group

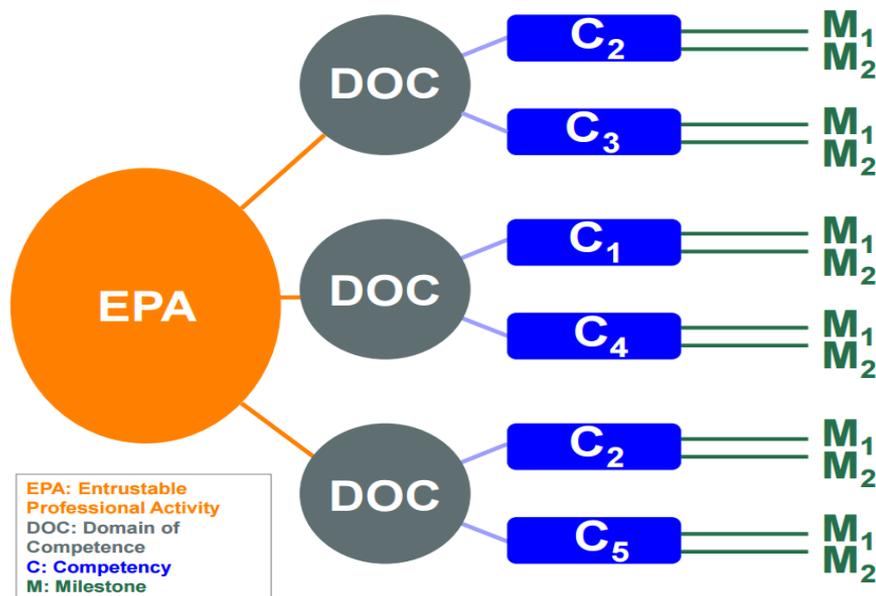
Convened in 2015 to develop:

- Definitions
- Framework for veterinary medical education
 - Domains, competencies, sub-competencies
- Assessment tools
- Entrustable Professional Activities (EPAs)
 - Units of professional practice
 - Tasks or responsibilities to be entrusted to the unsupervised execution by a trainee upon attainment of sufficient competence
 - Independently executable, observable, and measureable in their process and outcome

Entrustable Professional Activities



- Not an alternative for competencies, but a means to translate competencies into clinical practice
- Competencies are descriptors of veterinarians
- EPAs are descriptors of work
- EPAs usually require multiple competencies in an integrative, holistic nature



ten cate, O. Nuts and bolts of entrustable professional activities. *J Grad Med Ed*, March 2013.



AAVMC Working Group

1. Clinical reasoning and decision-making
2. Individual animal care and management
3. Animal population care and management
4. Public health
5. Communication
6. Collaboration
7. Professionalism and professional identity
8. Financial and practice management
9. Scholarship

8. Financial and practice management

- Delivers veterinary services compliant with legal and regulatory requirements
 - Acts in accordance with veterinary practice acts and licensing board regulations (VCPR)
 - Selects drugs in accordance with regulatory, legal requirements (ELUD)
- Upholds the health and safety of patients, clients, and members of the veterinary team
 - Adopts behaviors appropriate to workplace health and safety regulations
 - Complies with government regulations (e.g., radiation)
 - Contributes to a culture of wellbeing within the practice



Competence-based training and Assessment

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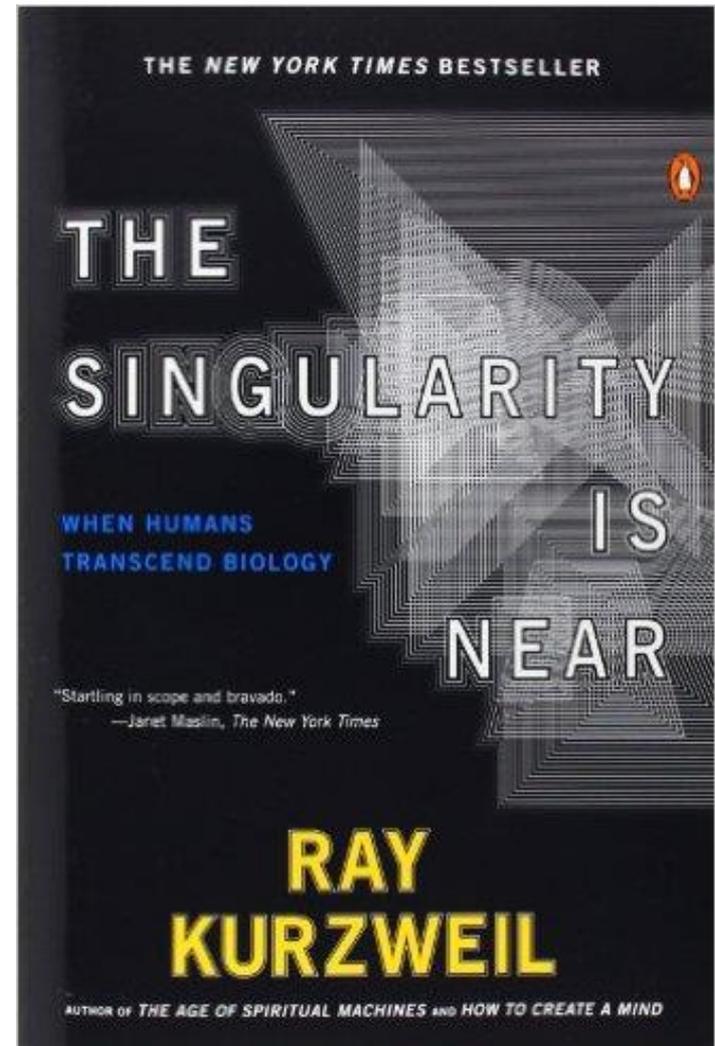
- Focus on outcomes
- Emphasis on abilities
- De-emphasis of time-based training
- Promotion of learner-centeredness

“Co
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oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.

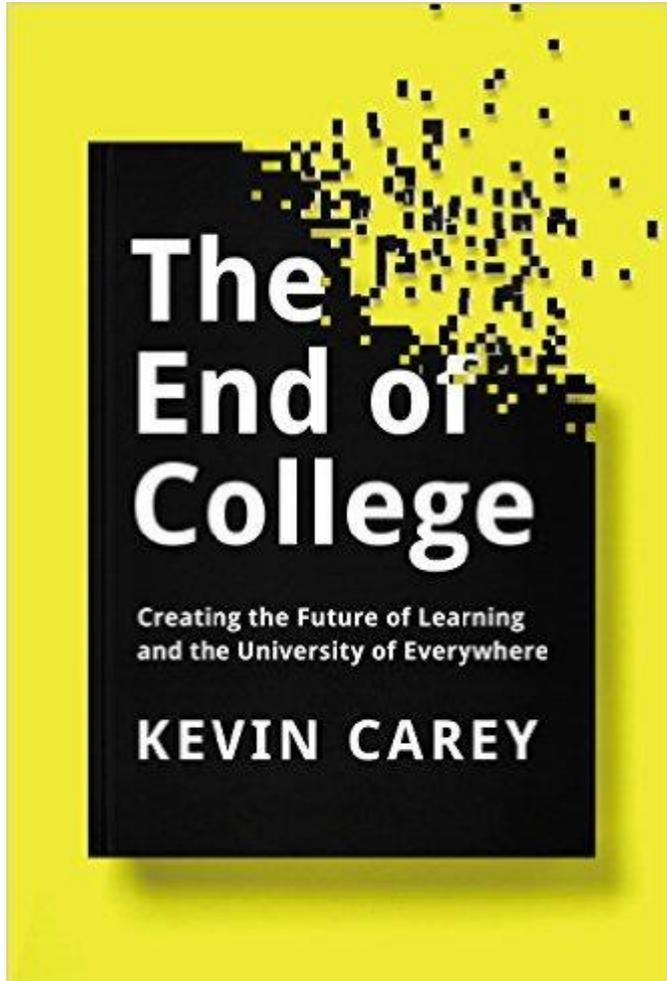
The [Law of Accelerating Returns](#) predicts an exponential increase in technologies like computers, genetics, nanotechnology, robotics, and artificial intelligence.

This will lead to a technological singularity in the year 2045, a point where progress is so rapid it outstrips humans' ability to comprehend it.





Innovation in Higher Education



Higher education is ripe for disruptive innovation

- Not much has changed in 150 years
- Innovation is stifled in the current system

3 Big Ideas

- Liberal Arts
 - John Henry Newman
- Practical Training
 - Justin Smith Morrill
- Research Institute
 - Wilhelm von Humboldt

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- Liberal Arts
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Hybrid Model

- Inefficient and conflicted
- Education is disfavored
- Institutional isomorphism



Innovation in Higher Education

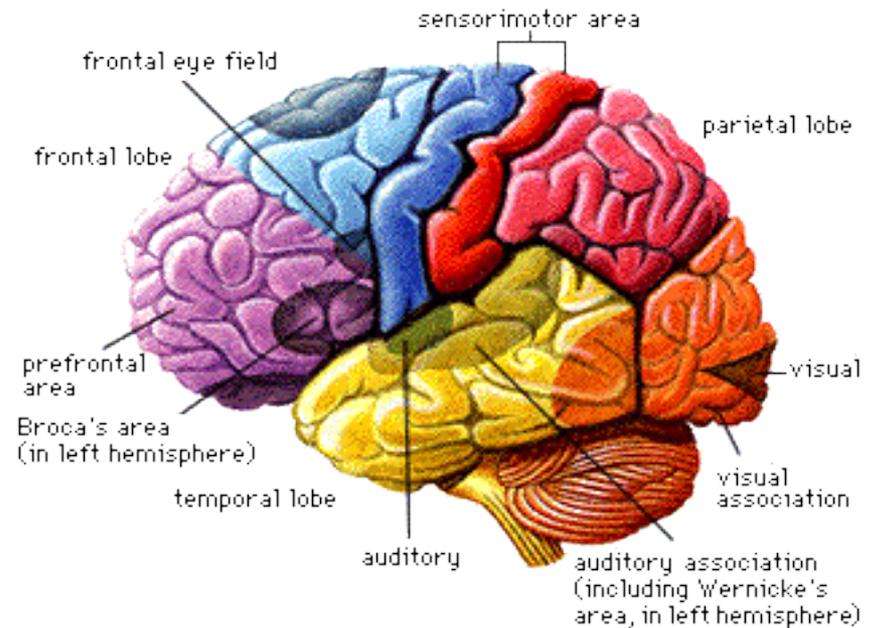
*What
Information
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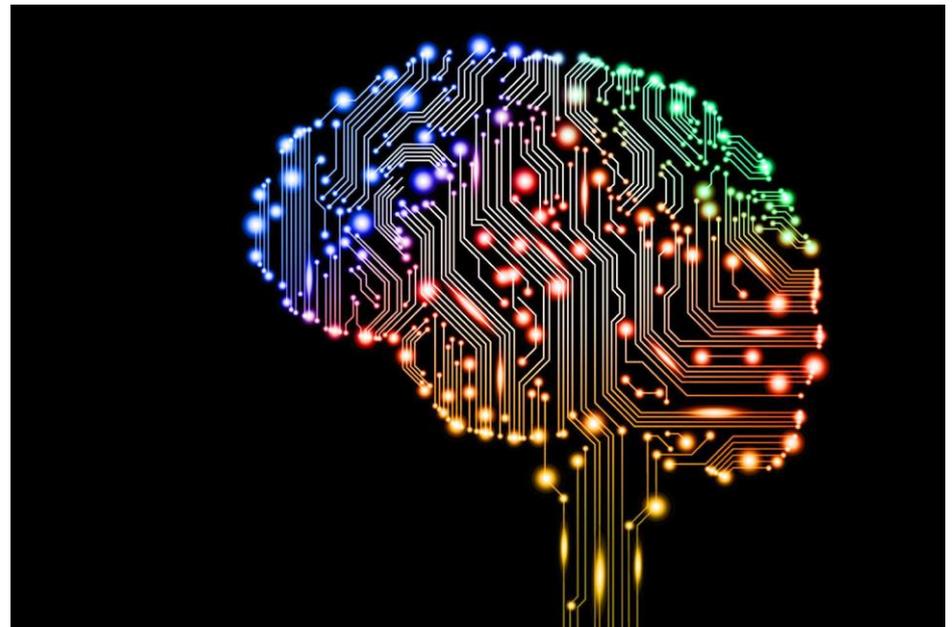
Uniquely Individual

- Abstract thought
- Active learning
- Higher order cognition



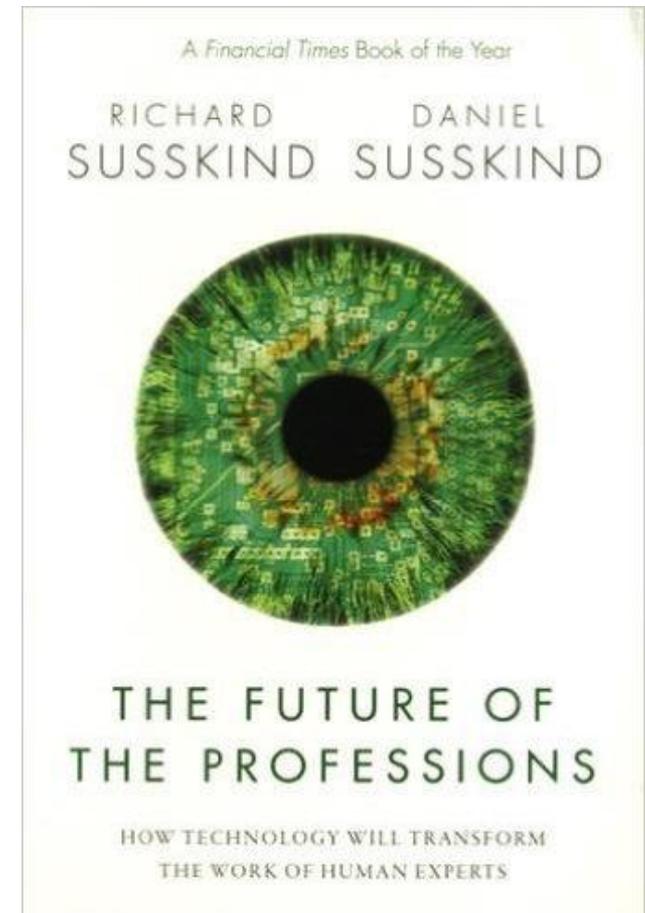
Personalized Teaching

- Customized
- Instant feedback
- Self-paced
- Adaptive

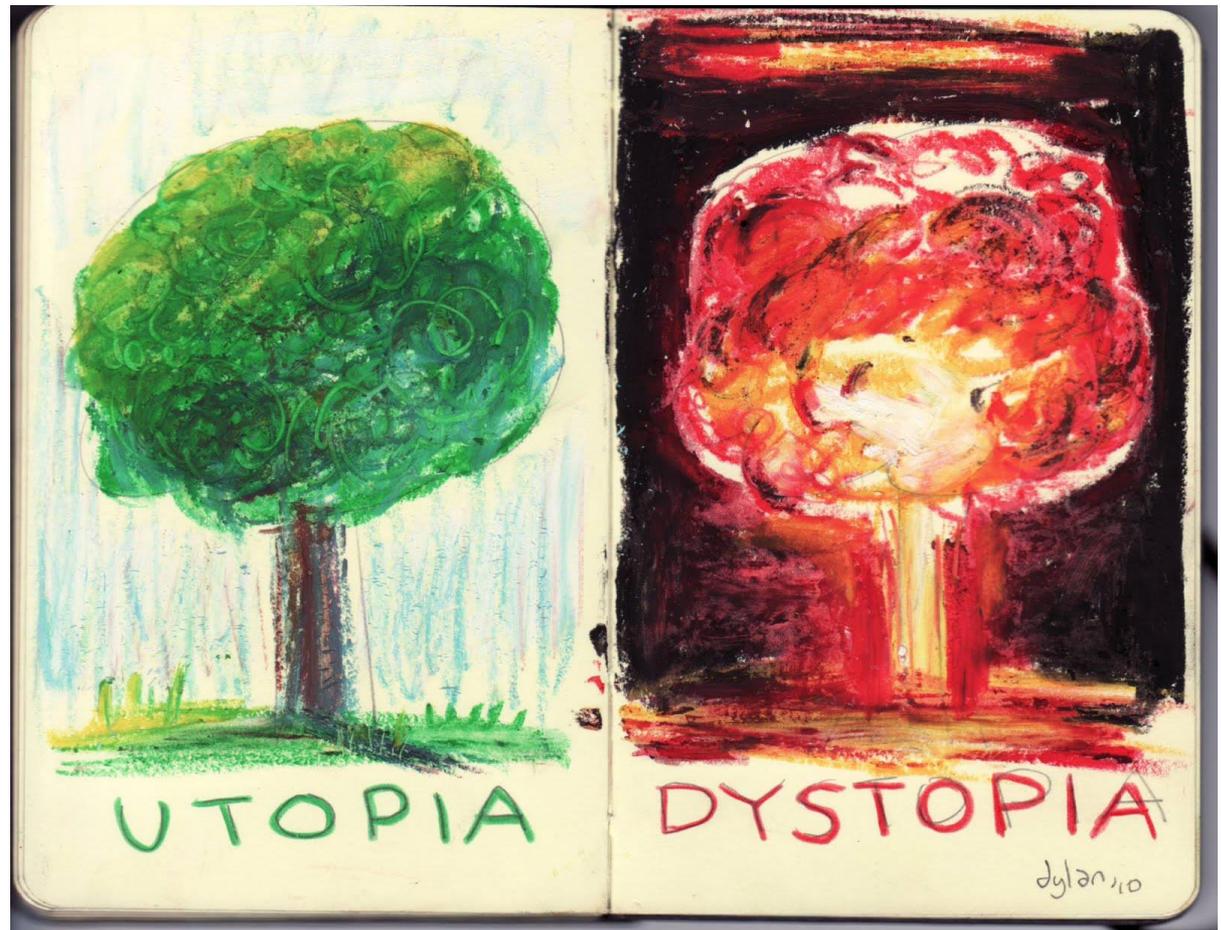


How technology will transform the work of human experts

- We will neither need nor want professionals to work as they did in the 20th Century
- Increasingly capable systems will change the way expertise is made available
 - Telehealth
 - Artificial Intelligence



What's next?





The End of Veterinary School

Embrace the Change

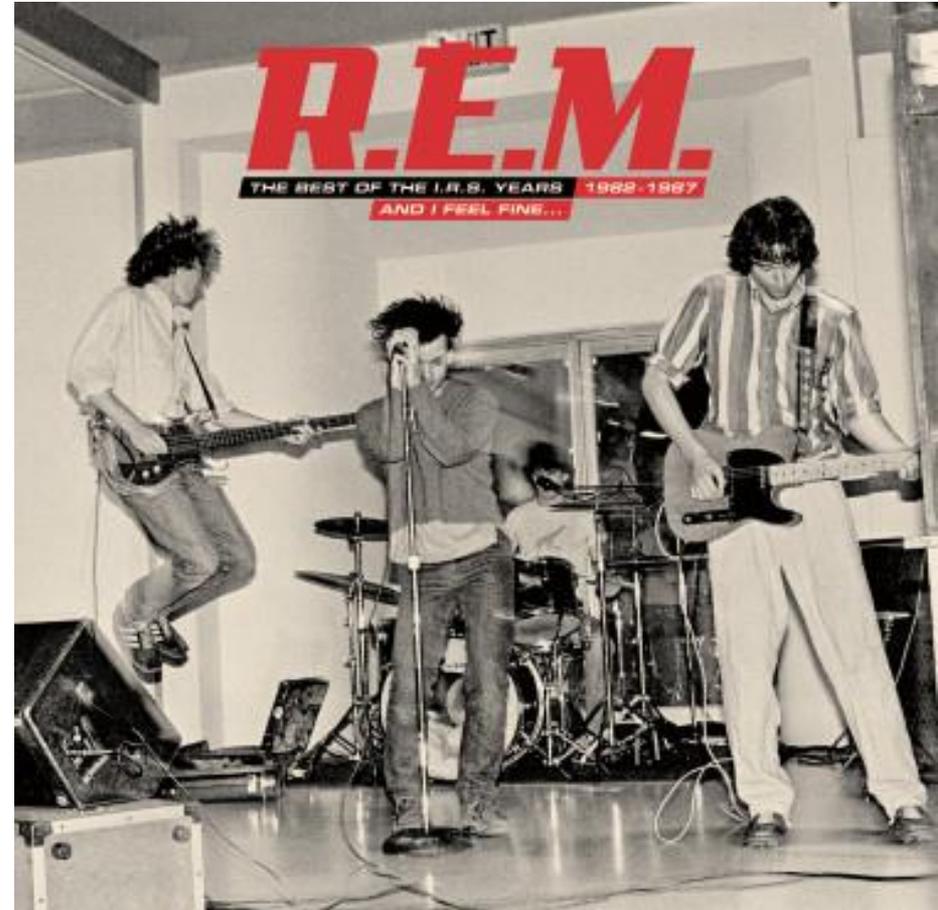
Harness the technology

Redefine the value of education

- De-emphasize time-based training
 - Develop students' abilities
 - Flexible, individually-oriented curriculum
- Promote learner-centeredness
 - Students take responsibility for their own learning
 - Develop skill in seeking and providing feedback

“It’s the end of the world as we know it”

– R.E.M.



*“It’s the end of the
world as we know it”
(And I feel fine)
– R.E.M.*

