



The SoTL: Understanding the Concept & its Application in Academic Programs & Emergency Management

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Introduction

Education is the foundation and bedrock of a nation



- Gives competitive edge to nations in:
 - Economic, technological, social, & cultural development
 - Area of innovation & power hegemony in general
- Nations focus on transforming their educational system by:
 - Emphasizing STEM
 - Ensuring competence, critical thinking, & skill development



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Introduction (contd.)

Education is the foundation and bedrock of a nation (contd.)

- Teachers focus on teaching and practice aimed at:
 - Student learning, knowledge acquisition, and skill training
 - Bringing about a “pedagogical revolution”
 - Enhancing teaching and learning – the concept of SoTL

(Kreber & Kanuka, 2006; Rice, 2006)

- SoTL process facilitates improvement in student learning
 - Involves peer-review of teaching
 - Seeks to transform student to be creative thinker
 - Transmits knowledge and ability for advance learning

(Thomas, 2011; Quin & Vardi, 2011)



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Introduction (contd.)

Method

- Systematic review of some vital current literature on SoTL

Objective

- SoTL contribution to advancement of some academic fields
- SoTL contribution to Emergency Management

Significance

- Identification of challenges and opportunities facing disciplines
- Identification of challenges and opportunities facing EM



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Exploring the Meaning of SoTL

Education has gone through transformation and innovation

- Aims at improving the effectiveness in teaching and learning
 - One such transformation and innovation is SoTL
 - SoTL is at the core of current transformation in Hi Ed

SoTL allows educators to seek evidence of “what works”

- Share that with their academic community
- SoTL focuses on methodological pluralism
 - No single methodological approach in SoTL (no magic bullet) – discipline-specific with context dependent

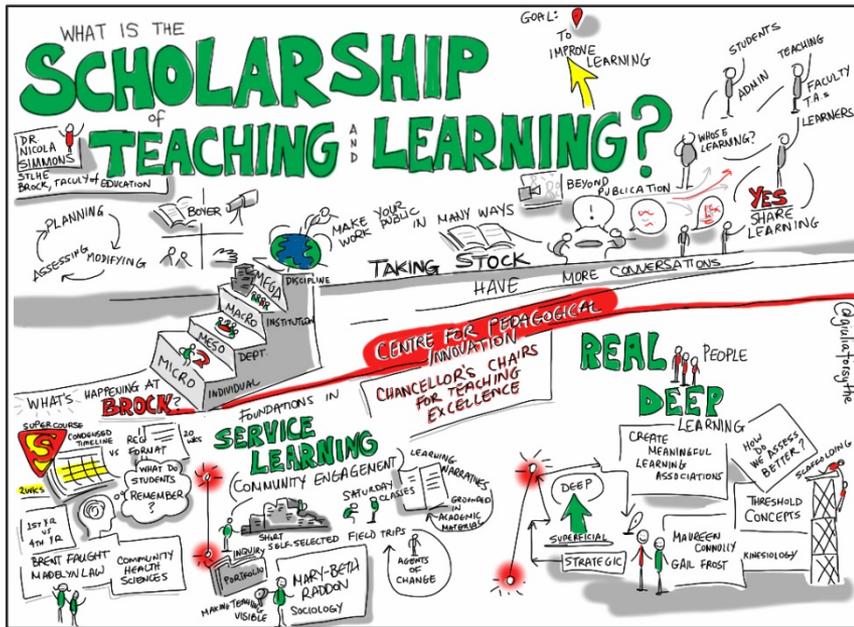
(Hutchings, 2000; Kreber & Kanuka, 2006)



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Exploring the Meaning of SoTL (contd.)

What is the SoTL?



EFFECTIVE
TEACHING
& LEARNING



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Exploring the Meaning of SoTL (contd.)

SoTL definition

- Evidence-based methodical examination of student knowledge
 - In turn inform and advance the practice of teaching (Feldmann-Jensen et al., 2019)

SoTL academics use their classrooms as crucible for practice

- In teaching and learning, recording successes and failures
 - In their research for other scholars to build on or avoid

SoTL experts and scholars share their pedagogical knowledge

(Pace, 2004)



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Historical Origin of the SoTL: Boyer

President of Carnegie Fdn. for the Advancement of Teaching:1979-1995



Scholarship Reconsidered

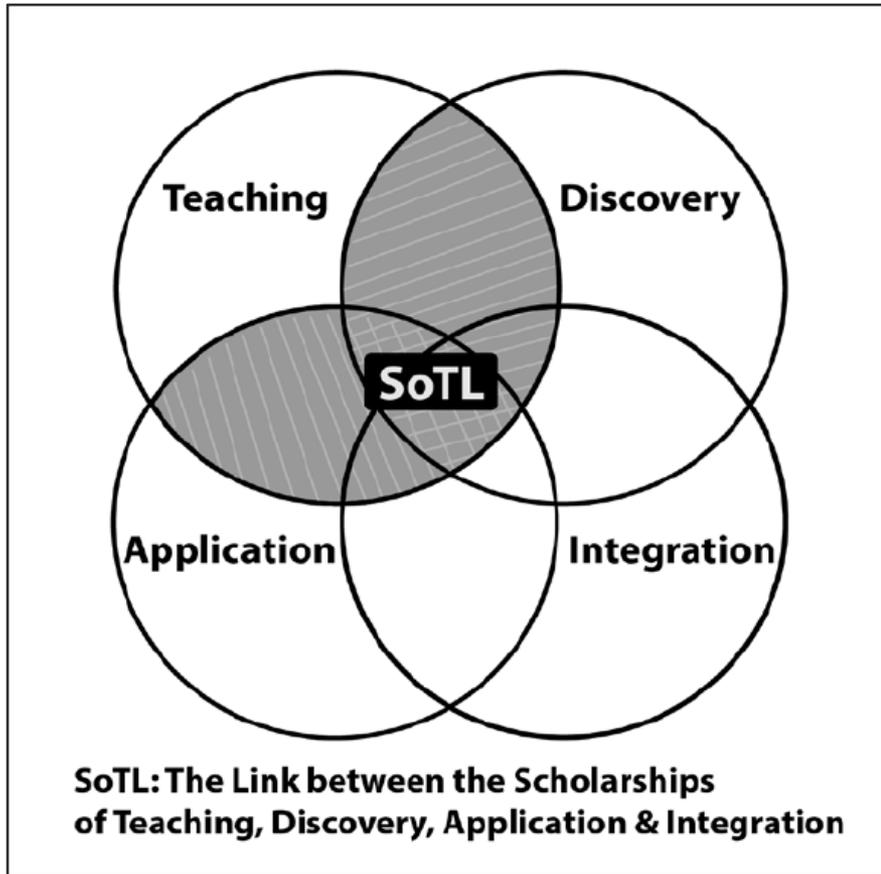


Fig. 1 Boyer's Model of Scholarship



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Boyer's Scholarship Model Application



- Concept of SoTL: Boyer (1990) brain child
- SoTL: Evaluation of effectiveness of pedagogy and student learning
- Effectiveness outcome: Measured by collecting feedback data on what and how well students learn in the teaching process – comparing pedagogy instruction with SoTL method
- Teachers & students benefit



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Historical Origin of the SoTL (contd.)

Carnegie Academy at the center of educational transformation

- Innovation and methodological pedagogical approaches

Carnegie Academy nurtured and promoted SoTL

- Via the Carnegie Foundation for the Advancement of SoTL
 - The institution published two edited book volumes advancing the SoTL

(Hutchings, 2000; Hutchings, Babb, & Bjork, 2000; Huber & Morreale, 2002)



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Historical Origin of the SoTL (contd.)

Other historical developments driving new interest in SoTL are:

- New students
 - Changes in student demographics – learning English & Math
- National priorities
 - Education in sciences, e.g., STEM
- Public accountability
 - Public accountability to state and Accreditation Board
- Changing pedagogical technologies
 - Examples: Web-based, YouTube, videos, screen capture tools, mp3 player, and Google scholar

(Huber & Morreale, 2002)



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Major Lessons from Existing SoTL Lit:

Research and Methods of Inquiry

SoTL acts as a variety of traditional and digital means of T&L

- SoTL has the goal of effective communication
 - Dissemination of ideas and findings to academic community

SoTL research may include:

- Reflection and analysis, interviews and case studies, questionnaires and surveys, analysis of existing data, and observational

Methods of inquiry include virtual and physical classroom

- Brings about an engaging way of teaching and learning

(Gurung & Wilson, 2011; Wilson-Doenges & Gurung, 2013)



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Major Lessons from Existing SoTL Lit:

Research and Methods of Inquiry (contd.)

SoTL accepted worldwide and gaining popularity

- Effective and essential tool in transforming pedagogical approach
- Methodological pluralism invokes “thinking outside the box”

SoTL roundly criticized by Boshier (2009)

- Scholarship of teaching used as a substitute for other activities
- Boyer’s definition conceptually confused
- SoTL is difficult to measure
- SoTL relies on peer review; not creative and critical thinking; and neoliberal



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Disciplinary Application of the SoTL

The use of SoTL cuts across several disciplines of study

- The application includes
 - Improvement techniques, shared mechanisms, outcomes and making SoTL works as career path

SoTL is applied within

- Engineering and Science (Kelly, Nesbit, & Oliver, 2012)
- Public Administration (PA) (Stuteville & Click, 2016)
- Political Science (Trepanier, 2017)
- Law (Crossley & Silverman, 2016)
- Health care (Burns & Appelt, 2013)
- Family sciences (Maurer & Law, 2016)



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Disciplinary Application of the SoTL



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Disciplinary Application of the SoTL

SoTL is applied also within

- Communication Studies
- History Lessons
- English Studies
- Interdisciplinary Programs
- Management Sciences
- Sociology
- Psychology
- Mathematics
- Chemistry

(Huber & Morreale, 2002)



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Disciplinary Application of the SoTL

Comparing Engineering & Sc. and PA SoTL application experiences

Engineering and Sciences compared to Public Administration (PA) have differing experiences with SoTL application

- Engineering and Sciences scholars training is deep in quantitative
 - Embedded in statistical analysis with varying worldview
- Engineers trained in STEM had difficulty transitioning to SoTL
 - The difficulty ameliorated with assistance from community of SoTL scholars

(Kelly et al., 2012)



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Disciplinary Application of the SoTL

Comparing Engineering & Sc. and PA SoTL application experiences

Engineering and Sciences compared to Public Administration have differing experiences with SoTL application (contd.)

- Public Administration scholars trained in both quantitative and qualitative
 - Its incorporation of SoTL into its intellectual tradition was easy
- For example, Stuteville and Click (2016) utilized a case study design to assess SoTL in Public Administration 2009-2013
- PA Journal of Public Affairs Education is devoted to SoTL
- Engineering and PA disciplines show the influence of SoTL



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Disciplinary Application of the SoTL

SoTL is revolutionary with pluralistic methodological approach

- Discipline-specific context
- Provide nature and role of intellectual exchange across discipline

SoTL has community of scholars helping others in the profession

- SoTL takes time, personal commitment, and passion

SoTL encourages innovation leading teachers to have critical eye on their ideas

- Looking for outcome using different kinds of student learning methods

(Huber & Morreale, 2002)



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Importance of the SoTL

ED TRANSFORMATION



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Importance of the SoTL (contd.)

SoTL provides several benefits

- Brings innovation and transformation in education
- Pluralistic methodological pedagogy with discipline-specific context
 - Cut across disciplines while improving education standards
 - Disseminates academic findings to broad audience
 - Shares study findings with the academic community
 - Contribute to a shared purpose (Feldmann-Jensen et al, 2019)
- Help faculty develop rigorous SoTL (Pace, 2004)
 - Could also enable faculty respond to challenges
 - Improves the quality of scholars' work



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Importance of the SoTL (contd.)

SoTL provides several benefits (contd.)

- Improve students' learning experience

(Kreber & Kanuka, 2006; Myatt & Rowland, 2014)

- Mold teachers and students
- Have positive outcome in discipline and profession
- Becomes international phenomenon and widely accepted
 - Transformative pedagogical approach to the 21st century
 - Production of problem-solving research and problem-based learning
 - Solution to challenges facing Hi Ed in 21st century
 - Prepares productive, skillful, independent and curious thinkers and problem-solving citizens to confront challenges of the 21st century (Kreber, 2007)



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Application of SoTL to EM

With Online Opportunity

Emergency Management is a discipline classified as less developed

- Has poor state of SoTL research

(Feldmann-Jensen et al, 2019)

SoTL is poised to become fundamental part in EM

- For example, Knox and Haupt (2015) publication is important
 - The study revealed participants' innate biases, preconceived notions, and stereotypes that could impact their response and recovery decision making in the field
 - Application: Could moderate EM students' decision making before they enter the profession – SoTL benefit (problem solving)



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Application of SoTL to EM

With Online Opportunity (contd.)

Feldmann-Jensen et al (2019) encourage EM scholars to incorporate SoTL concept and principles in their research

- Due to EM interdisciplinary nature, the discipline has advantage over others
 - Applying the scholarship of integration
- Devotion of an EM journal is essential in advancing SoTL
 - For example, in PA – Journal of Public Affairs Education (Feldmann-Jensen et al, 2019)



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Application of SoTL to EM

With Online Opportunity (contd.)



Digital Teaching/Learning

ONLINE
RESOURCES



FOR
TEACHING
AND
LEARNING



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Application of SoTL to EM

With Online Opportunity (contd.)

With new advances in technology, EM faculty have opportunity to utilize these platforms, e.g., web-based/online, WebEx, Zoom

- Kelly (2000) conducted comparative study on two sections of a history class (online vs traditional face-to-face classroom)
 - Findings: 1) The study suggests the online students did better than face-to-face
 - 2) Online students produced sophisticated essays and spent more time researching their topics than their face-to-face counterparts
 - 3) Students in the online option were more likely to go back and review earlier materials in the course



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Application of SoTL to EM

With Online Opportunity (contd.)

The emerging technology such as cloud computing can enhance SoTL and aids educators practice their profession

- (The practice of using a network of remote servers hosted by Internet to store, manage, and process data)
- Cloud computing has significant practical implication for SoTL
- The platform can enhance engagement among students, educators and researchers in a cost effective manner
- The platform is important in web-based/online EM
- Online EM classes good for full time workers

(Thomas, 2011)



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Future Considerations

For sustainability and a broader reach, scholars should be encouraged to embrace SoTL

- Encourage culture that prioritizes SoTL
 - The change should come from all levels of administrative faculty

Servage (2009) proposes introduction of SoTL in K-12 education

- Focus on valid student learning and teaching practices

Hutchings (2011) suggests colleges and universities should provide an environment that encourages SoTL

- Provide funding for research materials and teaching-related expenses such as attending conferences



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Future Considerations (contd.)

Shulman (2000b) theorizes what the future of SoTL may look like

- His observations were in three distinctive areas
 - 1) Scholarly fidelity
 - Motivated by a spirit of devotion that expresses professionalism commitment
 - Indicates the role of a professor as a teacher, mentor, steward, and public servant



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Future Considerations (contd.)

Shulman (2000b) theorizes what the future of SoTL may look like

- His observations were in three distinctive areas (contd.)
 - 2) Changes can be expected in the work of individual scholars resulting in convergence of method
 - These changes may include
 - New models for SoTL
 - New relationships with colleagues
 - New career paths and options
 - New conventions and ways for sharing work with others
 - These observations hinge on the realization that good teaching requires a period of reflection and analysis to gauge what works and what does not work and share outcome with colleagues



Future Considerations (contd.)

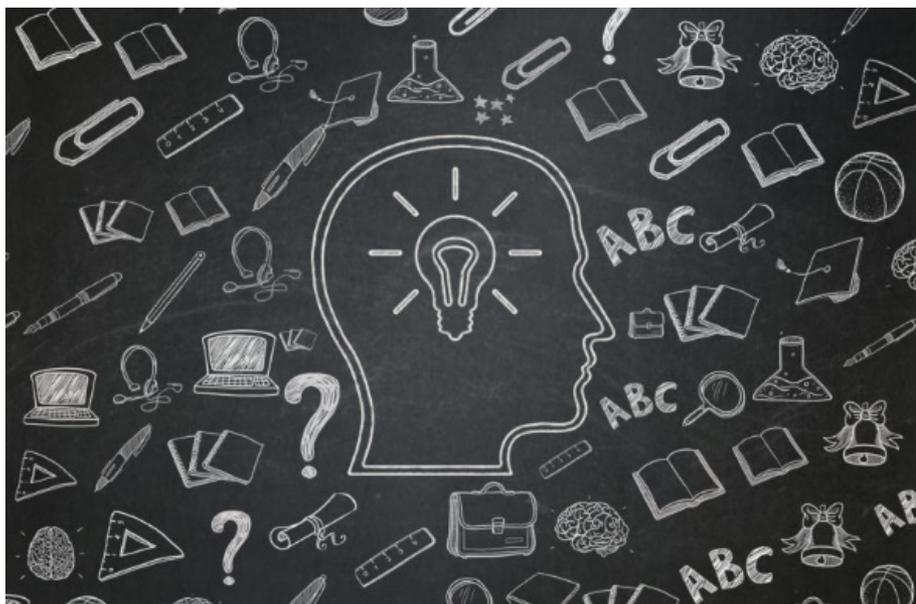
Shulman (2000b) theorizes what the future of SoTL may look like

- His observations were in three distinctive areas (contd.)
 - 3) Institutional transformations leading to the establishment of teaching academies
 - SoTL involves consulting with colleagues on methodological approaches in the trade
 - Institutions where these scholars work should develop formal structures merging the institutions' commitment to pedagogy and research
 - Establishment of interdisciplinary teaching academy bringing together faculty with common interest that includes SoTL – form of Think Tank



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Conclusion



- Ed has gone through transformation and innovation aimed at improving effectiveness in teaching and learning, resulting in critical thinking and skill development
- One such process is SoTL
- SoTL cut across academic fields and barrier with pluralistic methodological approach
- SoTL is widely accepted, popular, and has a bright future



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Thanks for Coming

Q&A



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