Exploring Threshold Concepts as Portals to Doctoral Student Success

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PURPOSE OF THE PILOT STUDY

TO EXPLORE CHALLENGES OR THRESHOLD CONCEPTS

THAT STUDENTS FACE IN THE DEVELOPMENT OF THE KNOWLEDGE, BEHAVIORS, AND ATTITUDES

THAT CHARACTERIZE SUCCESSFUL DOCTORAL STUDENTS IN A DISCIPLINE.

BUT WHAT ARE THRESHOLD CONCEPTS?



THE STUMBLING BLOCKS FOR STUDENTS ON THE SCHOLARLY PATH



THRESHOLD CONCEPTS AND TROUBLESOME KNOWLEDGE: LINKAGES TO WAYS OF THINKING AND PRACTICING WITHIN THE DISCIPLINES

JAN MEYER AND RAY LAND

ENHANCING TEACHING-LEARNING ENVIRONMENTS IN UNDERGRADUATE COURSES (THE ETL PROJECT, UNIVERSITY OF EDINBURGH)

OCCASIONAL REPORT 4, MAY 2003

CHARACTERISTICS OF A THRESHOLD CONCEPT

- TRANSFORMATIVE
- IRREVERSIBLE
- INTEGRATIVE
- BOUNDED
- TROUBLESOME



THE LIMINAL STATE

- THE SPACE A LEARNER OCCUPIES DURING THE PROCESS OF MASTERY OF A THRESHOLD CONCEPT.
- LEARNING IS BOTH AFFECTIVE AND COGNITIVE
- LEARNING INVOLVES IDENTITY SHIFTS WHICH CAN ENTAIL TROUBLESOME, UNSETTLING JOURNEYS.

DOCTORATENESS: CONTENT AND PROCESS

TRAFFORD AND LESHEM (2009): DOCTORATENESS AS A THRESHOLD CONCEPT

- THINKING LIKE A RESEARCHER
- AN INDEPENDENT AND ORIGINAL CONTRIBUTION TO KNOWLEDGE AND A DEMONSTRATED UNDERSTANDING OF RESEARCH METHODOLOGY APPROPRIATE TO THE CHOSEN FIELD

KILEY (2009): IDENTIFYING THRESHOLD CONCEPTS AND PROPOSING STRATEGIES TO SUPPORT DOCTORAL CANDIDATES

HUMPHREY & SIMPSON (2012): WRITES OF PASSAGE: WRITING UP QUALITATIVE DATA AS A THRESHOLD CONCEPT IN DOCTORAL RESEARCH

WISKER & ROBINSON (2009): ENCOURAGING POSTGRADUATE STUDENTS OF LITERATURE AND ART TO CROSS CONCEPTUAL THRESHOLDS

RECENT STUDIES IN THE LIBRARY LITERATURE: THRESHOLD CONCEPTS AND IL

BLACKMORE (2010): "STUDENT ENGAGEMENT WITH INFORMATION: APPLYING A THRESHOLD CONCEPT APPROACH TO INFORMATION LITERACY DEVELOPMENT"

HOFER, TOWNSEND & BRUNETTİ (2012): "TROUBLESOME CONCEPTS AND INFORMATION LİTERACY: INVESTİGATİNG THRESHOLD CONCEPTS FOR İL İNSTRUCTION

TUCKER, WEEDMAN, BRUCE, & EDWARDS (2014): "LEARNING PORTALS: ANALYZING THRESHOLD CONCEPT THEORY FOR LIS EDUCATION"



- 1. WHAT DO ACADEMICS CONSIDER TO BE FUNDAMENTAL TO A GRASP OF THEIR SUBJECT?
- 2. WHAT DO STUDENTS FIND DIFFICULT TO GRASP?
- 3. WHAT CURRICULUM DESIGN INTERVENTIONS CAN SUPPORT MASTERY OF THESE DIFFICULTIES?

COUSIN, G. (2009). RESEARCHING LEARNING IN HIGHER EDUCATION. NEW YORK: ROUTLEDGE.



THE PILOT STUDY

TO EXPLORE FACULTY AND STUDENT PERCEPTIONS OF THE STUMBLING BLOCKS GRADUATE STUDENTS FACE IN THE DOCTORAL PROCESS,

AND

TO USE THESE FINDINGS AND FURTHER CONVERSATIONS WITH FACULTY AND STUDENTS

TO CREATE A PRELIMINARY THRESHOLD CONCEPT FRAMEWORK TO GUIDE DEVELOPMENT OF INSTRUCTIONAL DESIGN AND OTHER SUPPORT STRATEGIES FOR DOCTORAL STUDENTS.



METHODOLOGY

- GRADUATE FACULTY/DISSERTATION ADVISORS IN THE COLLEGE OF EDUCATION AT A PUBLIC URBAN UNIVERSITY
- SEMI-STRUCTURED INTERVIEWS
- SURVEY

SEMİ-STRUCTURED INTERVİEWS: QUESTİONS

• WHAT **CHALLENGES AND STUMBLING BLOCKS** DO GRADUATE STUDENTS FACE IN THEIR JOURNEY AS DOCTORAL CANDIDATES?

 WHAT STRATEGIES HAVE YOU USED TO ASSIST DOCTORAL CANDIDATES IN MEETING THESE CHALLENGES AND STUMBLING BLOCKS?

• WHAT FUNDAMENTAL AND TRANSFORMATIVE CONCEPTS, BEHAVIORS AND ATTITUDES MUST STUDENTS MASTER IN ORDER TO MOVE FORWARD AND BE SUCCESSFUL IN THE DOCTORAL PROCESS?

VİTAE RESEARCHER DEVELOPMENT FRAMEWORK

Engagement, influence and impact

The knowledge and skills to work with others and ensure the wider impact of research.

Domain D

Domain C

Research governance and organisation

© Poto Careers Pesearch and Advisory Centre (CRAC) Limited. www.vitae.ac.uk/Rufrontinger The knowledge of the

Knowledge and intellectual abilities

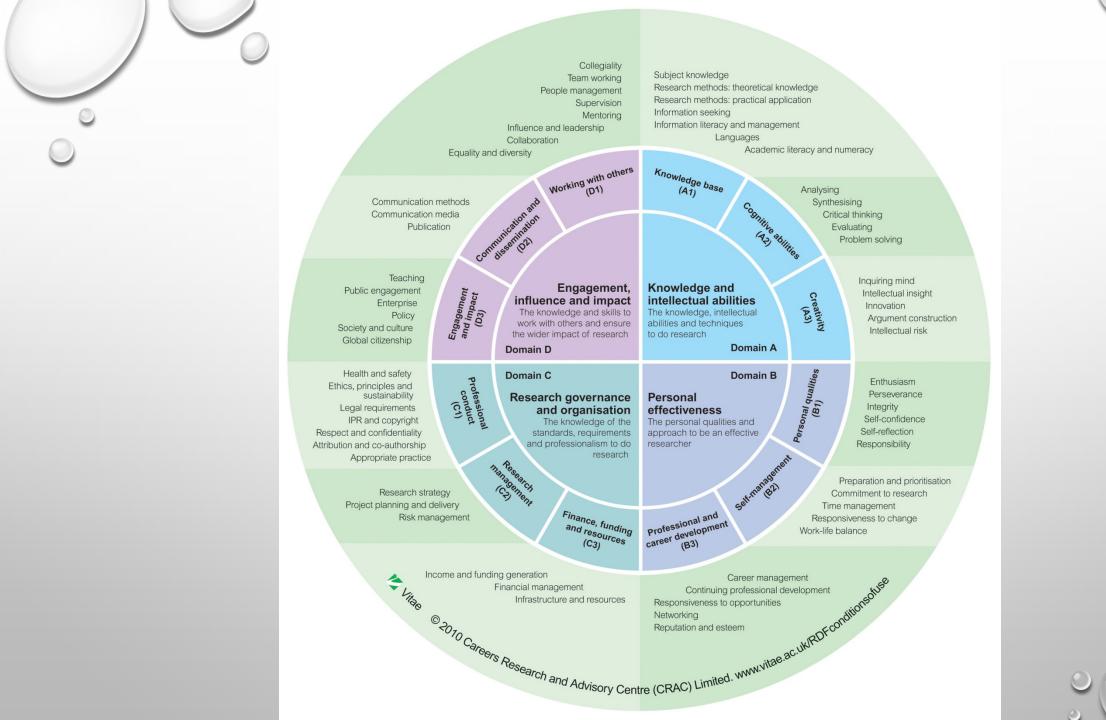
The knowledge, intellectual abilities and techniques to do research.

Domain A

Domain B

Personal effectiveness

The personal qualities and





• WHICH DOMAINS PRESENT THE GREATEST CHALLENGES FOR YOUR GRADUATE STUDENTS IN THEIR DEVELOPMENT AS SUCCESSFUL DOCTORAL CANDIDATES AND RESEARCHERS?

• WHICH DOMAINS ARE THE MOST IMPORTANT IN THE DEVELOPMENT OF SUCCESSFUL DOCTORAL STUDENTS?

FACULTY RANKING OF THE DOMAINS

MOST CHALLENGING

- A2:COGNITIVE ABILITIES
 - ANALYZING, SYNTHESIZING, CRITICAL THINKING, EVALUATING, PROBLEM SOLVING
- B2: SELF-MANAGEMENT
 - PREPARATION AND PRIORITIZATION,
 COMMITMENT TO RESEARCH, TIME
 MANAGEMENT, RESPONSIVENESS TO
 CHANGE, WORK-LIFE BALANCE
- D2: COMMUNICATION AND DISSEMINATION
 - COMMUNICATION METHODS,
 COMMUNICATION MEDIA, PUBLICATION

MOST IMPORTANT

• A2: COGNITIVE ABILITIES

B2: SELF-MANAGEMENT

- C2: RESEARCH MANAGEMENT
- A1: KNOWLEDGE BASE
- C3: PROFESSIONAL CONDUCT
- B1: PERSONAL QUALITIES

FACULTY RANKING OF THE DOMAINS

LEAST CHALLENGING

- C3: PROFESSIONAL CONDUCT
 - ETHICAL PRINCIPLES, ATTRIBUTION & CO-AUTHORSHIP, APPROPRIATE PRACTICE
- B3: PROFESSIONAL AND CAREER DEVELOPMENT
 - CAREER MANAGEMENT, CONTINUING
 PROFESSIONAL DEVELOPMENT, NETWORKING,
 REPUTATION & ESTEEM
- D1: WORKING WITH OTHERS
 - COLLEGIALITY, COLLABORATION, WORKING IN TEAMS, INFLUENCE & LEADERSHIP, EQUALITY & DIVERSITY

LEAST İMPORTANT

- C1: FINANCE, FUNDING, AND RESOURCES
 - INCOME AND FUNDING, INFRASTRUCTURE AND RESOURCES
- D3: ENGAGEMENT & İMPACT
 - TEACHING, PUBLIC ENGAGEMENT, SOCIETY & CULTURE, GLOBAL CITIZENSHIP

CONTINUATION OF THE PILOT STUDY

- COMPLETE INTERVIEWS AND SURVEYS WITH ALL GRADUATE EDUCATION FACULTY
- COMPARE THE CHALLENGES IDENTIFIED IN THE INTERVIEWS WITH THE CHALLENGES RANKED IN THE SURVEYS
- CONDUCT A FOLLOW-UP STUDY WITH DOCTORAL EDUCATION STUDENTS, USING THE SAME INTERVIEW AND SURVEY METHODOLOGY, IN ORDER TO COMPARE THE PERCEPTIONS OF STUDENTS AND FACULTY.
- USE FINDINGS TO DEVELOP A PRELIMINARY FRAMEWORK OF THRESHOLD CONCEPTS FOR THE DOCTORAL PROCESS



CRUCIAL CONVERSATIONS

THE DIALOGUE AMONGST FACULTY, LIBRARIANS, AND STUDENTS IS ESSENTIAL IN THE PROCESS OF DEVELOPING THE THRESHOLD CONCEPT FRAMEWORK.

THE PURPOSE OF THE THRESHOLD CONCEPTS IS TO IMPROVE THE LEARNING EXPERIENCE OF STUDENTS.

CROSS THE THRESHOLD TO INSTRUCTIONAL DESIGN AND OTHER SUPPORT STRATEGIES

INSTRUCTIONAL DESIGN PRINCIPLES FOR THRESHOLD CONCEPT MASTERY

- 1. JEWELS IN THE CURRICULUM
- 2. LISTENING FOR UNDERSTANDING
- 3. A HOLDING ENVIRONMENT FOR THE TOLERATION OF CONFUSION
- 4. RECURSIVENESS AND EXCURSIVENESS

COUSIN, G. (2006). AN INTRODUCTION TO THRESHOLD CONCEPTS, PLANET, 17, 4-5.



- THE STUDY OF DIFFICULTY ULTIMATELY IS REVEALED BY THE LEARNER.
- THE PROCESS IS NOT LINEAR AND WILL BE DIFFERENT FOR EACH INDIVIDUAL.
- THE DOCTORAL JOURNAL INVOLVES BOTH COGNITIVE & AFFECTIVE DIMENSIONS
- WHEN STUDENTS ARE IN THE PROCESS OF MASTERING A THRESHOLD CONCEPT, THEY ARE IN A LIMINAL STATE THAT NEEDS TO BE RECOGNIZED.
- THRESHOLD CONCEPTS CAN PROVIDE A COMMON LANGUAGE.
- LIBRARIANS BRING THE INFORMATION LITERACY LENS TO THE LEARNING COLLABORATION.

THRESHOLD CONCEPTS: WHY THEY MATTER

- "IDENTIFICATION OF THRESHOLD CONCEPTS MATTERS BECAUSE OF THE POTENTIAL IMPACT OF THRESHOLD CONCEPTS ON THE LEARNING EXPERIENCES OF STUDENTS."
- "ALTHOUGH RESEARCH RELATED TO THE IDENTIFICATION OF THRESHOLD CONCEPTS IS IN ITS INFANCY, WE KNOW THE FOLLOWING:

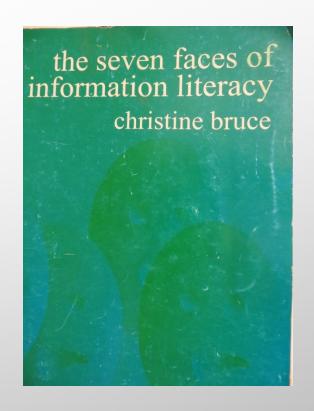
FIRSTLY, THAT CONVERSATION AMONGST TEACHING AND LEARNING STAKEHOLDERS IS FUNDAMENTAL.

SECONDLY, IT IS ESSENTIAL THAT THE POTENTIAL OF THRESHOLD CONCEPTS IS RECOGNIZED AND REMAINS A CLEAR FOCUS."

SARAH BARRADELL (2013): "THE İDENTİFİCATİON OF THRESHOLD CONCEPTS: A REVİEW OF THEORETİCAL COMPLEXİTİES AND METHODOLOGİCAL CHALLENGES"

INFORMATION LITERACY AS IT IS EXPERIENCED ...

"WITHIN THIS FRAMEWORK, TEACHING AND LEARNING INFORMATION LITERACY WOULD STRESS NOT SKILLS ACQUISITION BUT THE GROWTH OF LEARNERS IN COMING TO UNDERSTAND AND EXPERIENCE INFORMATION LITERACY IN THESE DIFFERENT WAYS."





THANK YOU!