# Founding common ground between (boring) IL training and information challenges experienced in workplace

Ina Fourie

Department of Information Science, University of Pretoria
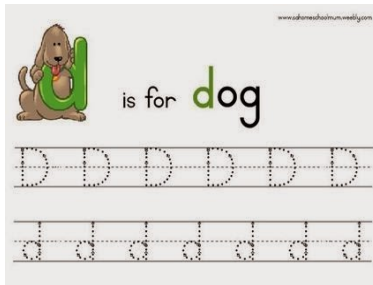
ina.fourie@up.ac.za

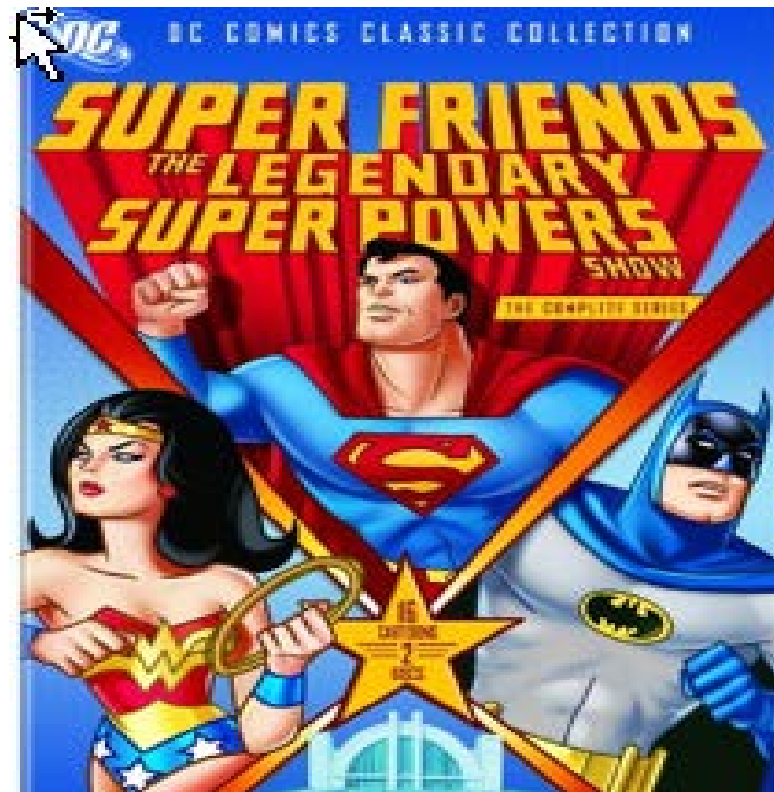# INTRODUCTION – Life long skills

Exciting

... *less* exciting

2

# INTRODUCTION - life-long... super...

Taking off!

SUPER MOM

Do not tell them – Show them

3

# Introduction – life-long skills (cont.)

No need to argue the importance or value of information literacy (IL)

   Some, however, still see it as an inherent/natural skill (no need to be taught)

Current attempts to improve and strengthen IL training are valid and important e.g.,

   Adapting IL frameworks, extending IL skill sets– digital literacy/digital fluency

   *Addressing post-truth/fake news, focusing on a specific discipline or related disciplines, addressing anxieties, integrating IL with a curriculum, addressing needs of special groups, 4th industrial revolution, specific target groups, meta-literacy and communities of trust

Scaffolding skills and complexities

Transferable skills (academic IL skills need to be taught in relation to workplace information practices)

INA.FOURIE@UP.AC.ZA

# What do we know about IL skills and training?



5
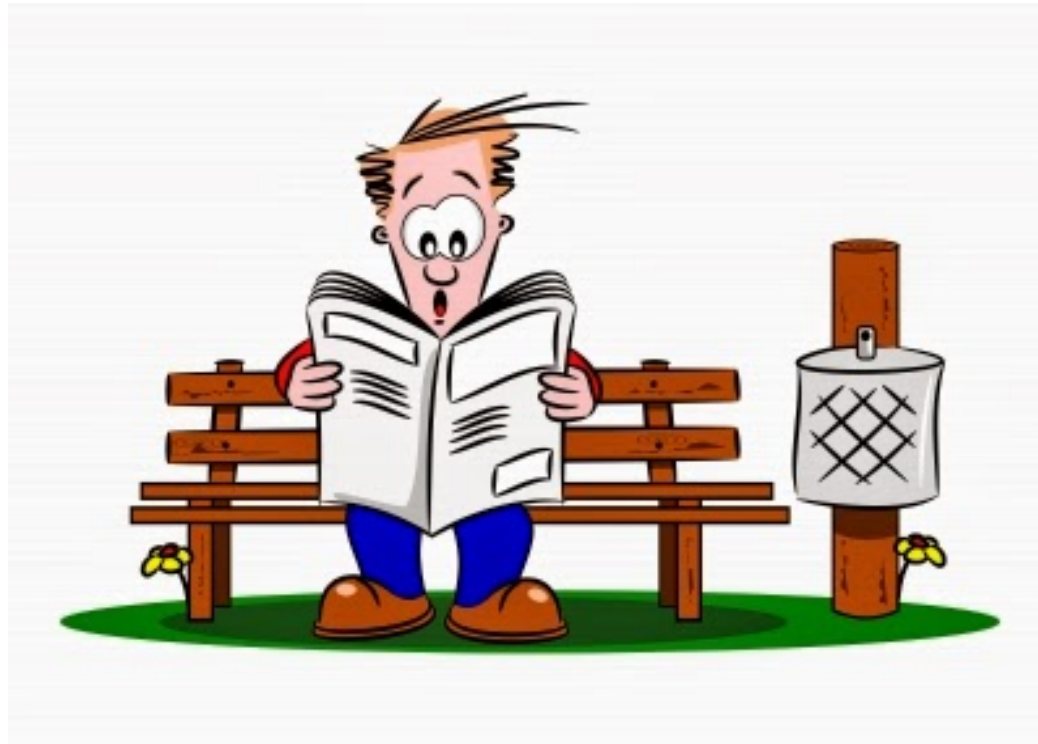
# What do we know about moving forward?

Adapting skills to be taught; revising IL frameworks

Variety of teaching and assessment methods; the need to involve learners

Diversity of IL and related skills are called for:
    health information literacy, citizen information literacy

Students mostly do not find IL training exciting and worthwhile;  Lackof enthusiasm and commitment for IL training
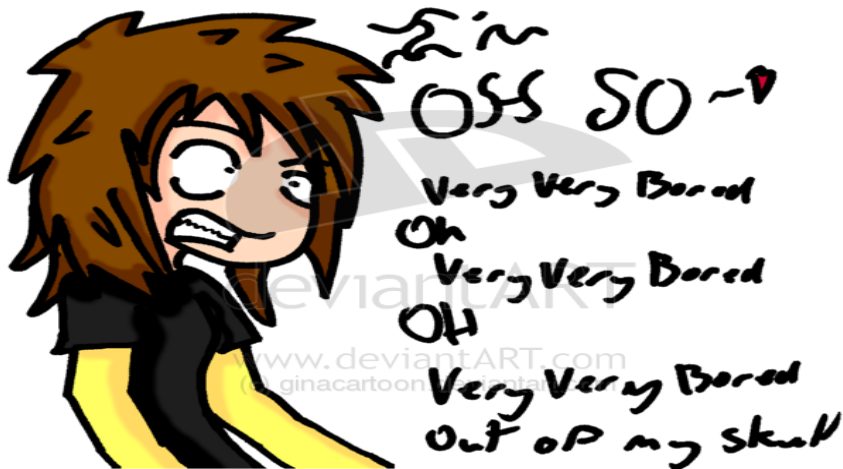
# Workplace… jobs … after university
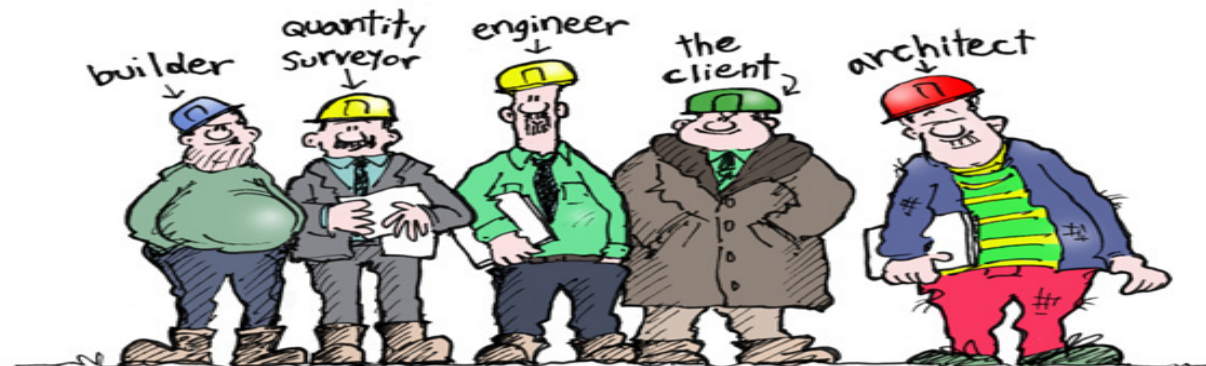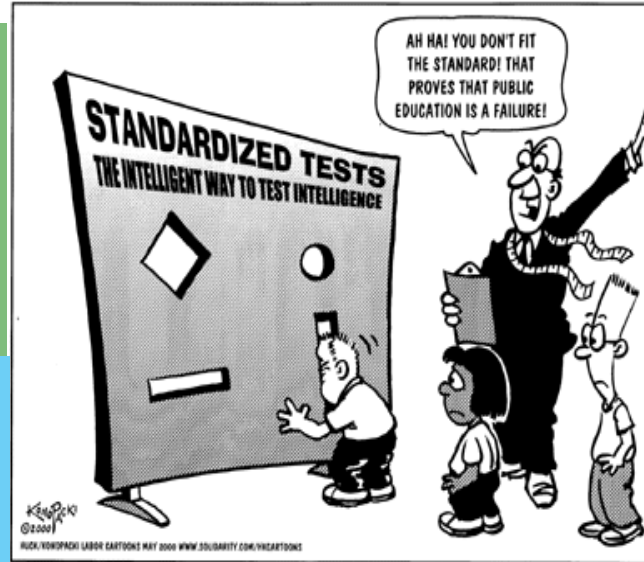
# Which challenges comes with the job?

… And which challenges can be addressed by IL skills?

Many studies on workplace IL and information behaviour and information practices in workplace…

IL training needs to build on these findings

# Academic IL skills transfer project as background

Collaborator: Prof Heidi Julien (University at Buffalo, NY [USA])

Data collection: 2018

Participants: 23 graduate students from the University of Pretoria; completed a compulsory information literacy course between 2006 – 2016

- Pseudonyms

Research approach: qualitative

Research method: semi-structured interviews; critical incident technique

Theoretical framework: practice theory; information practices

9

# Applying Third Space to the key question for this presentation

Third space is an intersectional zone and adaptive space where participants experience diverse ways of knowing involving their own prior knowledge, their knowledge from outside the curriculum (e.g., IL curriculum) as well as knowledge gained from information sharing and information encountering to construct new worldviews and insights into the needs and goals of workplace.

*How can information challenges experienced in diverse workplaces enrich academic information literacy training?*

10

# A few words from participants

Easier to navigate and retrieve information ("... *than for people who did not receive such training*") [Vera]

"*Optimal search results*" – how we phrase our terms and search strings; sub-consciously use what he learned in the information literacy course [Anthony]

"*Skills grew through experience*"; "*Skills learned through experience*" [Charles]

"*I think a lot of ... students ... who are more computer literate, you lose their interest in the beginning and they miss certain skills which [can] help them a lot, actually. Whereas, someone [who] is starting out fresh, they go in with the mind set to say, "I know nothing so I am trying to learn as much as possible." So, they pick up more of it. But, to students that might be a bit more advanced, I think they... it's difficult to keep their interest through the entire course.*" [Happy]

"*There are quite a few critical incidents. So it seems to go from one day to the next.*" [Bob]

11

# Diversity …. transferability

Cannot address all workplace contexts, but can find interesting examples e.g., regarding:

- Topics

- Tasks

- Needs to find solutions

- Knowledge and skills

- Situational awareness

- Institutional orientation

- Typical workplace challenges in finding information

12

# Examples of "critical" information incidents at workplace: topics (1)

Poultry industry – outbreak of a disease. Lulu explained:

- *"I am treating the flock"*
- *"I have 32 days…"*
- *"So, that's also something - how are we actually as vets going to make sure that our chickens are safe, the foods is safe, the bird's welfare is not compromised, but trying to not treat with antibiotics. So that's quite a big, I would say, issue currently."* [Lulu]
- Deciding on appropriate treatments for diseases, humane methods for disposal of disease infected chickens
- Global disease outbreaks affecting animals

Software engineering: developing small-scale prototypes to see if something is working – based on information collected from the Internet – learn from error messages and then use error messages to search further for information

13

# Examples of "critical" information incidents at workplace: topics (2)

Software design – improving features; need to draw on what others have done, what is out in the field, ... and then improve

Development of business solutions - first require collecting information from clients based on their information needs

Abiding to country specific regulations on using antibiotics in chicken farming

Academic scholarly publishing (e.g. writing an article)
- Need to look for background on the concept, government documents on policies and initiatives, grey literature on national campaigns

Implementing innovative alternative teaching methods to continue with lecturing during periods of student unrests

Marketing -  improving online presence and users' interaction experiences on a company website

14

# Examples of "critical" information incidents at workplace: tasks (1)

Searching for inspiration and new ideas
- E.g., innovative floor plans for interior design

Transferring and sharing information between stakeholders
- Large files (e.g., Dropbox, WeTransfer)
- Supporting interdisciplinary collaboration
- Transferring confidential information

Monitoring information, e.g.,

- For disease outbreaks - World Organisation for Animal Health - OIE
- New IT developments, new developments in game design

15

# Examples of "critical" information incidents at workplace: tasks (2)

Identifying partners in the industry who are willing to share information

- E.g., pharmaceutical industry sharing information on medication with veterinarians (or doctors & other health professionals)

Finding images and case studies relevant to industry or a specific problem

Implementation of software, systems, products

16

# Examples of "critical" information incidents at workplace: finding solutions (1)

Finding software for personal information management

Finding means to monitor information sharing practices and avoiding misinterpretations

- E.g., cross-disciplinary and cross-cultural collaboration

Identifying experts for consultation

- Value of social capital

Finding evidence based practices and examples of best practices

17

# Examples of "critical" information incidents at workplace: finding solutions (2)

Providing evidence and support for solutions, choices and arguments:

- *"That's also important in the workplace. Because, when you get an answer, you need to go, "Okay, but, why? Why do we do it this way." Because sometimes the answer will be, you can't do it. And then, trying to follow through the "whys" is very difficult when they don't have any supporting criteria. And, sometimes, if it was just a little bit, the supporting argument was laid out a little better, it makes your life a little easier".* [Bob]

Finding means to assess information from disparate information sources and making a decision; it appears as if the biggest challenge lies in decision-making.

18

# Examples of "critical" information incidents at workplace: knowledge and skills required (1)

Skills in critical thinking – there are not always clear-cut and easy answers

Knowledge of information infrastructures and mapping information infrastructures
- Skills in using internal information resources such as internal databases and repositories
- Awareness of external information resources

Knowledge of the value of human resources
- Newsfeeds, friends, discussion among colleagues, support groups

Knowledge and skills in personal information management, time management and scheduling

Skills in geographic navigation – using maps and related tools
- Using Google maps

19

# Examples of "critical" information incidents at workplace: knowledge and skills required (2)

Knowledge of securing information e.g., sharing people's investment information
- Company policies and practices

Knowledge of effective styles of content presentation e.g., visualisation
- Targeting presentations to specific audiences

Knowledge of dealing with issues of conflicts of interest
- Meeting procedures

Working with data and not just information
- E.g., historical data on the effectiveness of vaccinations in chicken farming (a veterinarian perspective)

Getting free, peer-reviewed articles e.g., in health
- ResearchGate
- Open access journals in the field

Finding grey literature relevant to a specific field or industry

20

# Examples of "critical" information incidents at workplace: situational awareness (1)

Recognising phases in a project and different types of information needs e.g., in an architectural interior design project

- Conceptual stage – need inspiration and new ideas (e.g., floor plans using Pintrest)

Recognising tools needed specific to workplace practices

Understanding country specific regulations and trends and the impact of tasks and information needs e.g., on using antibiotics to treat chickens

21

# Examples of "critical" information incidents at workplace: situational awareness (2)

Assessing professional challenges in a context that is different from the focus of the degree curriculum, e.g.

- Veterinarian working in the poultry industry (vs the treatment of animals such as cats and dogs)

Accommodating the skill sets and IT preferences of colleagues – especially older colleagues

- *An interesting question might be: how do you address this in a mindful and respectful manner*?

Value of professional organisations as information resources

INA.FOURIE@UP.AC.ZA

# Examples of "critical" information incidents at workplace: institutional orientation (1)

Adapting to the preferred mode of sharing information e.g. email, Google Drive

- Company etiquette of sharing information e.g., to the Group or the Chair of a professional organisation
- Information sharing practices e.g., weekly

*"… the firm --- they invest in us to ensure that information and knowledge management is stored and archived efficiently"*. [Mickey Mouse]

Need for organisational enculturation

23

# Implied from study on transfer of academic IL to workplace

Need to use different components of the information landscape at different points in time and for different purposes

Value of social capital – need to stay in touch with peer groups e.g., the people who studied academic information literacy skills with you – and extend as necessary; forming new professional groups

Value of good, reliable communication in discussion groups

> *"The more you help. The better reputation you get. And that reputation can actually transfer into people offering you jobs. A high salary."* [Bob]

24

# Typical workplace information challenges

Time – things need to be done quickly; Working with tight/compressed timelines
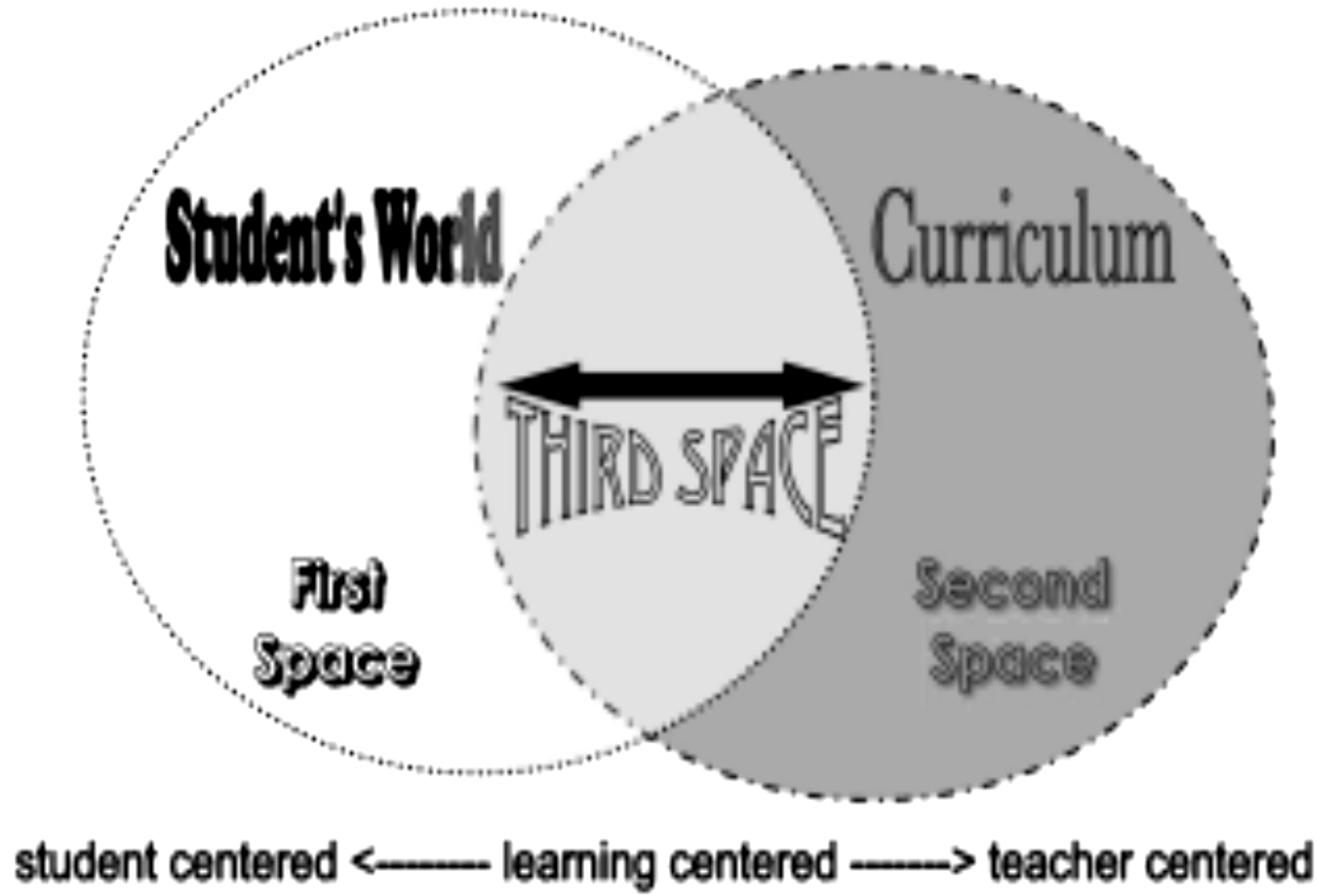
Abiding to company culture and company "speak/vocabulary"

Understanding company information infrastructure and communication procedures
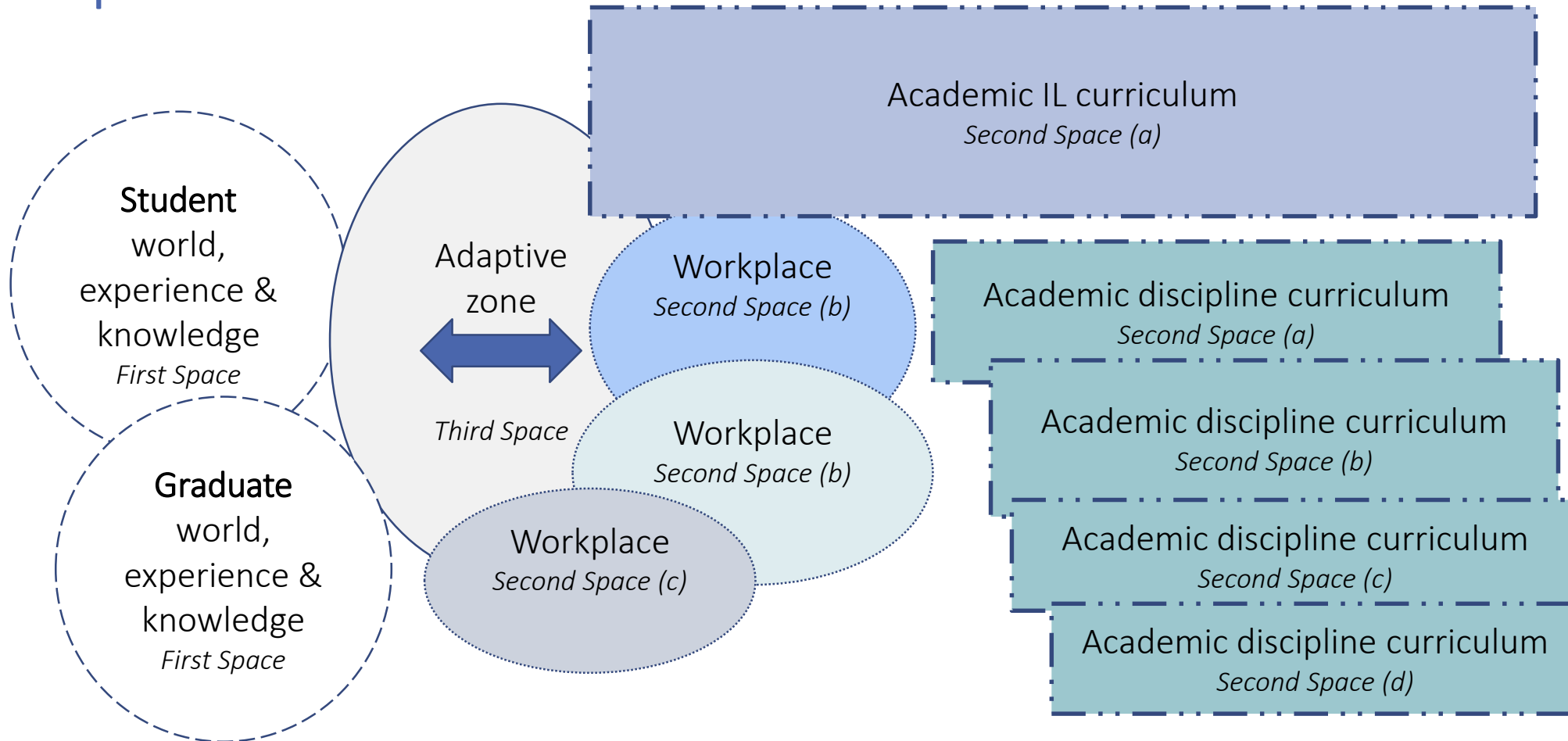
Respecting diversity in cultures

Respecting diversity in skill sets and work practices

25

# Third space in information literacy (Kuhlthau, Maniotes and Caspari)



student centered <------- learning centered ------> teacher centered

# Applying a Third Space lens to accommodate workplace experience



Student world, experience & knowledge
*First Space*

Graduate world, experience & knowledge
*First Space*

Adaptive zone

*Third Space*

Workplace
*Second Space (b)*

Workplace
*Second Space (b)*

Workplace
*Second Space (c)*

Academic IL curriculum
*Second Space (a)*

Academic discipline curriculum
*Second Space (a)*

Academic discipline curriculum
*Second Space (b)*

Academic discipline curriculum
*Second Space (c)*

Academic discipline curriculum
*Second Space (d)*

27

# A few suggestions for IL training

Search exercises related to:

Workplace – a variety (not intended as replacement of disciplinary curriculum related topics)
- Workplace practices such as knowledge management tools and methods
- Workplace requirements for keeping a competitive edge

Communities of practice

Workplace time management

Evidence-based practices e.g., evidence-based medicine, evidence-based engineering, evidence- based teaching, evidence-based policing, etc.

Productivity tools

28

# A few suggestions for IL training … increasing complexity

Dealing with change and change management, audience research, participatory design, collaborative work, search as learning

Acknowledging different levels of uncertainty and the need to work accordingly; ability to deal with uncertainty may increase with professional maturity

IL skills in workplace cannot be detached from professional maturity, tacit knowledge

29

# Theoretical issues to consider

Praxis, information practice

Situatedness

Participation in communities of practice

Institutional culture, institutional ethnography

Intervention research, design-based research, *socio-cultural research*

Vygotsky – zone of proximal development; also acknowledged in intervention research
Kuhlthau – zone of intervention

Eigenström – expansive learning

30

# Conclusion

Need authenticity from workplace…

Database of case studies; graduate narratives of critical information incidents

Acknowledging and addressing the naivety to belief that "one-size-fits-all-for-ever-and-ever-and-in-every-situation-and-every-context"

Coping in everyday life and in workplace, making good decisions and professional leadership cannot be based on simplistic provision of factual information

Information analysis and information processing are key challenges in moving from seeking and finding of information to actual use – documentation, decision-making

INA.FOURIE@UP.AC.ZA

# Thank you for your time and attention

Prof Ina Fourie

Department of Information Science

University of Pretoria

ina.fourie@up.ac.za

INA.FOURIE@UP.AC.ZA