



Between Two Worlds

A scenic view of a harbor at dusk. The water is a deep blue, and the sky is a lighter, hazy blue. In the background, a city skyline is visible with some lights starting to glow. The harbor is filled with numerous sailboats and yachts. On the right side of the frame, a large, dark silhouette of a tree stands prominently. The overall atmosphere is calm and serene.

Use of reflection for assessing
industry-collaborative student
projects

Practitioner Projects

- Industry-collaborative
 - Real client
 - Academic supervisor
 - Student organized and delivered
- Business information systems
 - Final year undergraduates
 - Real change management
- Assessment
 - Product
 - Process

Social perspective on learning

Practitioner projects: situated learning – a process of socialization into real world BIS project culture.

Focuses on the way people make sense of their experiences. Dewey defined learning as a continuous reorganization and reconstruction of experience through reflection.

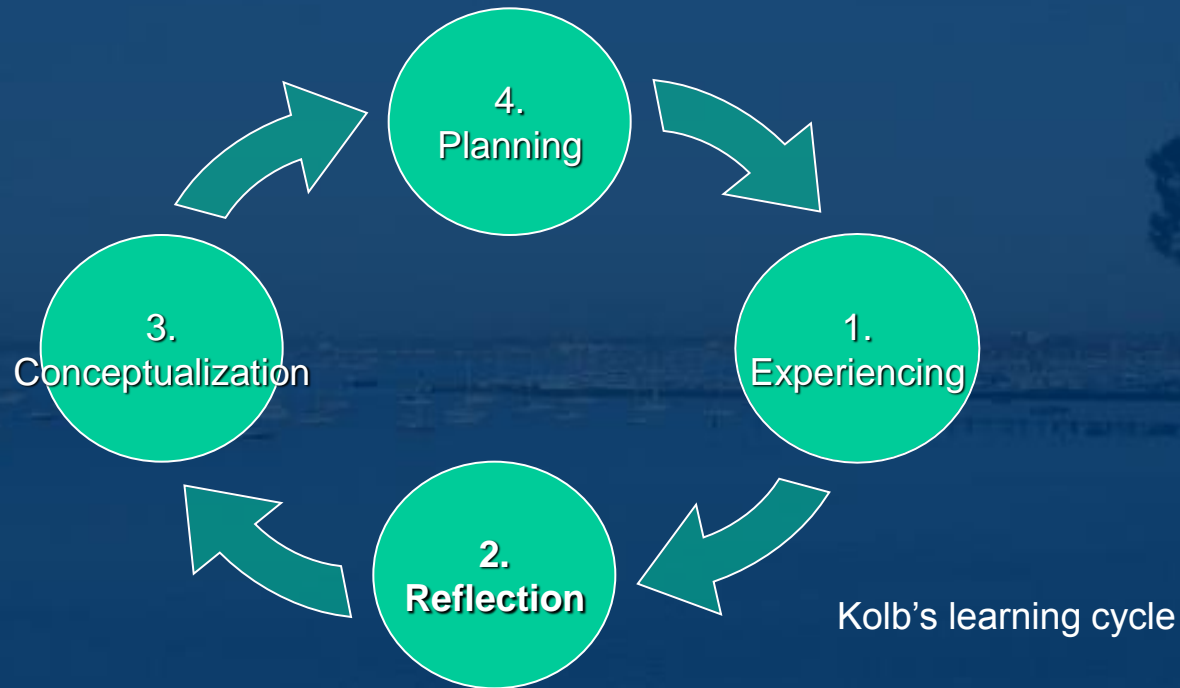
Reflection in assessment

Without reflection learning fails to develop from trial and error learning to higher levels of learning (Bateson 1973)

The imperative to do well academically discourages students from engaging in honest and open reflection (Hargreaves 2003)

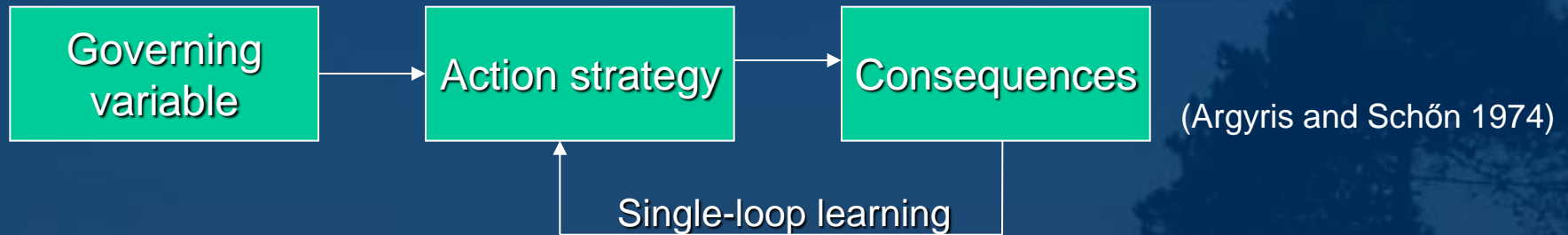
Assessment can be understood only in terms of the student's attempt to influence the assessors (Holmes 1995)

Reflection in experiential learning



A key role of reflection is to reveal theory-in-use and explore the nature of the fit with espoused theory.

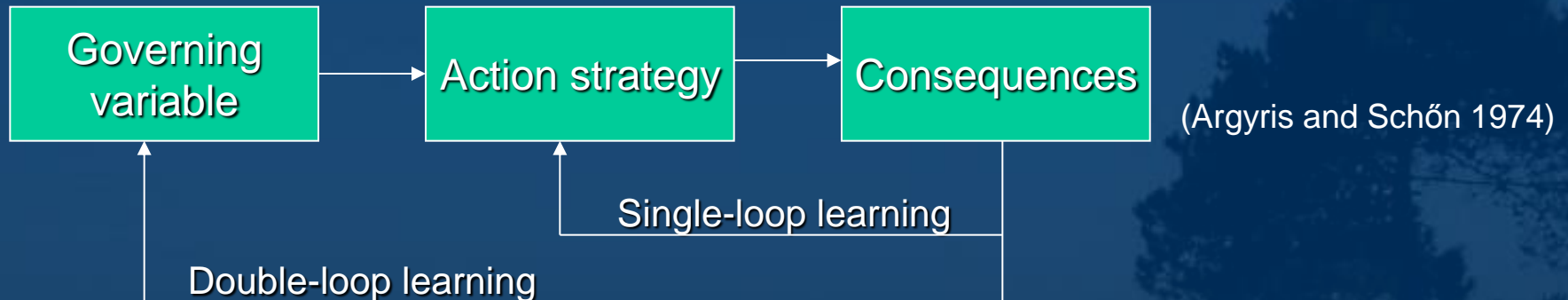
Learning loops



Single-loop learning

- Single feedback loop connects outcomes to strategies
- Assumptions modified to keep performance within range set by norms
- Processes tend to be self-seeking
- Emphasis on techniques and improving efficiency

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Double-loop learning

- Involves questioning assumptions behind goals and strategies
- Modifies norms that define effective performance
- More creative and reflexive
- Processes can be disconfirmable
- Considers 'notions of the good'

Theory-in-use characteristics

Model I

- Achieve the purpose as the actor defines it
- Win, do not lose
- Suppress negative feelings
- Emphasize rationality
- Control environment and task unilaterally
- Protect self and others unilaterally
- Face-saving moves

(Adapted from Argyris, Putnam & McLain Smith 1985)

Model II

- Valid information
- Free and informed choice
- Internal commitment
- Sharing control
- Participation in design and implementation of action
- Surfacing conflicting view
- Increased likelihood of double-loop learning

(Adapted from Anderson 1997)

Practitioners and projects need double loop learning

Practice is involved with dilemmas of value, with creating congruent outcomes in complex social, ethical and economic contexts (Lester 1999)

... as organizational and external environments become more complex, projects must evolve to be more organic in nature (Back and Seaker 2004)

The nature of project management is a barrier to learning
(Turner 2005)

How does tension between learning and performance play out in assessment?

- Qualitative case study research
- 25 students completed BIS Practitioner Projects in 2005
- Students' reflective accounts
 - Individual critical reviews
 - Team presentations
- Discourse analysis

Project management discourse

- Performance-orientated
 - time, cost, requirements
- Goals presented in concrete terms
 - discrete deliverables
- Emphasis on rationality – sensing and judging
 - compared with intuiting and perceiving that are thought to be consistent with double-loop learning
(Back and Seaker 2004)
- Techniques
 - to plan, monitor and control

Findings: Individual reflections

Key data categories	Percentage of students (n=25)
Communications	84
Teamwork	68
Functional knowledge	68
Problem-work	32
Goal preference - performance	64
Goal preference - learning	36
Self-theories - fixed	16
Self-theories - malleable	20
Model I theory-in-use	52
Model II theory-in-use	28

Findings: Individual (by cohort)

Key data categories	Cohort A (n=13 students with >55% in ISP)	Cohort B (n=12 students with <= 55% in ISP)
Communications	100	67
Teamwork	92	42
Functional knowledge	85	42
Problem-work	54	8
Goal preference - performance	85	42
Goal preference - learning	62	8
Self-theories - fixed	0	33
Self-theories - malleable	38	0
Model I theory-in-use	31	92
Model II theory-in-use	54	0

Findings: Team performance

Key data categories	Type 2 (n=8)	Type 1 (n=7)	Type 0 (n=10)
Communications	100	100	60
Teamwork	100	43	60
Functional knowledge	100	57	40
Problem-work	88	0	10
Goal preference - performance	88	57	50
Goal preference - learning	100	0(-)	10(-)
Self-theories - fixed	0	29	20
Self-theories - malleable	63	0	0
Model I theory-in-use	0	100	60
Model II theory-in-use	88	0	0

Distribution of cohorts between team types

Team type	Number of students from cohort A (n=13 students with >55% in ISP)	Number of students from cohort B (n=12 students with <=55% in ISP)
Team type 0	3	7
Team type 1	3	4
Team type 2	7	1

Conclusions

- Project management discourse tends to promote performance and can drive out learning
- For some students, practitioner projects are likely to reinforce model I theory-in-use inhibiting double-loop learning
- Academic capability and development of organizational norms seem to influence how tension between learning and performance plays out

And so ...

- Students are likely to be better prepared for the world of work if they are encouraged to develop a capability for double, rather than single, loop learning
- A starting point of enquiry, critique, reflection and reconstruction is more likely to develop a capacity for 'map making' than an education in 'map reading'
- Further work is needed to support the development of organizational norms that encourage learning in student projects
- Further research is needed to explore the relationships between double-loop learning, self-theories and other aspects of personality

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