

# An epistemology of practice

1. **Four distinct but interconnected elements of professional practice:**
  - **Assessing clients and/or situations** (sometimes briefly, sometimes involving a long process of investigation) and continuing to monitor their condition;
  - **Deciding what, if any, action to take**, both immediately and over a longer period (either on one's own or as a leader or member of a team);
  - **Pursuing an agreed course of action**, modifying, consulting and reassessing as and when necessary;
  - **Metacognitive monitoring** of oneself, people needing attention and the general progress of the case, problem, project or situation; and sometimes also learning through reflection on the experience.
  
2. **The contexts in which the practice takes place**
  
3. **Three modes of cognition, which depend on the speed and conditions in which the practice is conducted**

# Modes of Cognition

Type of process	Instant reflex	Rapid intuitive	Deliberative analytic
<b>Assessment of the situation</b>	Pattern recognition	Rapid interpretation	Prolonged diagnosis Review, discussion and analysis
<b>Decision making</b>	Instant response	Intuitive	Deliberative analysis/discussion
<b>Overt actions or scripts</b>	Routinized action	Routines punctuated by rapid decisions	Planned actions with Periodic progress reviews
<b>Meta-cognition</b>	Situational awareness	Implicit monitoring Short reflections	Monitoring of thought and activity Reflective learning

# The Scope of Tacit Knowledge

## **Understanding**

Implicit or incidental learning  
Implicit aggregation of episodes  
and impressions  
Hidden constructs

## **Knowledge use**

Transforming & resituating knowledge  
Retrieving knowledge from memory  
Recognising when to use knowledge  
Sensing how to use some knowledge

## **Skills**

Routinised  
Non-verbal or meta-verbal  
Intuitively monitored

## **Decision-making**

Rapid and intuitive  
Holistic assessment  
Judgement in complex  
uncertain situations

# Research questions for ESRC projects on mid-career and early career learning at work

- What is being learned?

# Research Methods

## **Project 1: Development of knowledge and skills at work**

Two interviews (6-9 months apart) with 120 professionals, managers and technicians in the business, engineering, and healthcare sectors.

## **Project 2: Early Career Learning at Work**

A longitudinal study of the learning of Accountants, Engineers and Nurses at the start of their careers, with four 1-2 day visits over 3 years, during which researchers:

- Observed activities and the work-place context
- Talked to mentors, preceptors, managers and trainers
- Interviewed the main participants

# Status of main participants in second project

The **graduate accountants and engineers** were formally contracted trainees

- Their employers have systems of organised training support
- Engineers have related degrees, but trainee accountants do not.

The **newly qualified nurses**

- Start work with more practical experience
- May have their learning needs neglected, despite official provision of induction and mentors.

# Advantages of Observation

- Educating the observer/interviewer about the working context, and thus enriching subsequent data gathering
- Enabling us to use workplace documents and activities as starting points for conversations about embedded knowledge and its acquisition that would otherwise have been impossible
- Providing 'clues' to the use of knowledge that must have been previously learnt, thus making it easier to track down implicit learning
- Allowing complexity to be appreciated, even if it was not fully explained to, nor fully understood by, the observer
- Discouraging the painting of 'ideal pictures' by informants when they know reality has been observed.

# Numbers of main informants and interviews

	<b>Newly Qualified Nurses</b>	<b>Graduate engineers</b>	<b>Trainee Accountants</b>
<b>Initial interviews</b>	40 (6 male)	36 (10 female)	14 (3 female)
<b>Third year interviews</b>	21 (4 male)	34 (10 female)	11 (3 female)
<b>Total interviews with participants</b>	91	121	53
<b>Interviews with managers, team leaders, mentors</b>	40	92	22



# Typology of Learning Modes

Work processes with learning as a by-product

Learning processes at or near the workplace

Learning actions within either type of process

# Work Processes with learning as a by-product

- Participation in group processes
- Working alongside others
- Consultation
- Tackling challenging tasks and roles
- Problem solving

# Learning Processes at or near the workplace

Being supervised

Being coached

Being mentored

Shadowing

Visiting other sites

Independent study

Conferences

Short courses

Working for a qualification

# Learning actions within either type of process

Asking questions

Listening and Observing

Getting information

Learning from mistakes

Reflecting

Locating resource people

Giving and receiving feedback

Use of mediating artefacts

# Settings for Feedback

**Immediate comment** on aspects of a task or role given **on-the-spot** or soon after the event by a co-participant or witness.

**Informal conversations away from the job** often convey indirect and/or unintended messages as well as intended advice.

**Formal roles such as mentor or supervisor** involve:

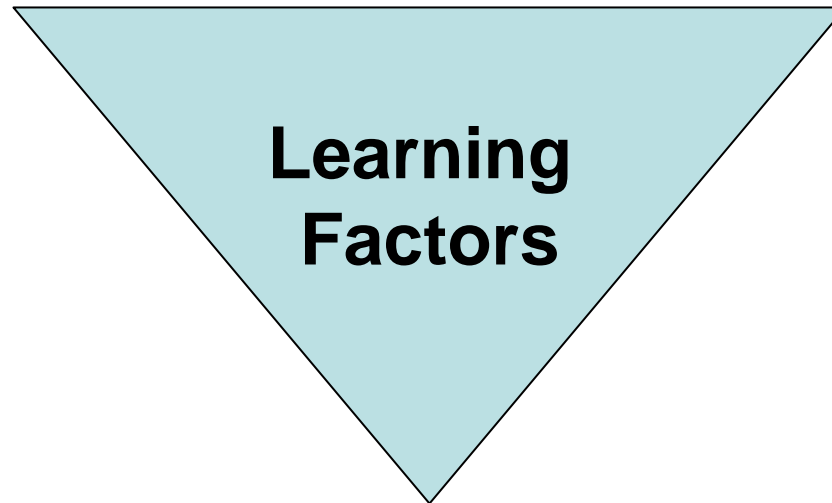
Some responsibility for a learner's short to medium term progress  
Obligation to provide formative feedback on a regular basis.

**Appraisal** is a process where designated appraisers are expected to:  
Give normative feedback on personal strengths and weaknesses  
Ascertain views on learning opportunities and meeting expectations.

# Factors affecting learning in the workplace # 1

**Challenge and  
value of the work**

**Feedback and  
support**

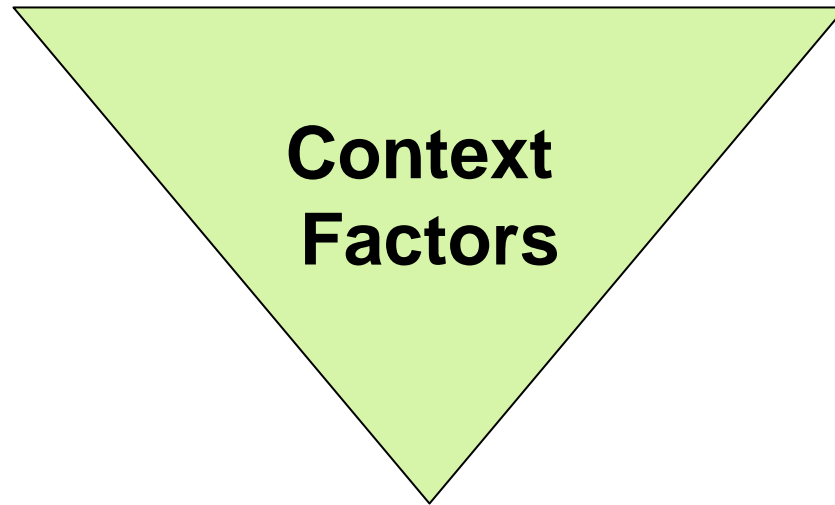


**Learning  
Factors**

**Confidence and commitment  
Personal agency and motivation**

# Factors affecting learning in the workplace # 2

**Allocation and structuring of work**



**Encounters and relationships with people at work**

**Individual participation and expectations of their performance and progress**





# The Role of Managers

To demonstrate **learning leadership** and be **trusted** by their staff

To **know their staff** and **trust** them

To be aware of their **concerns** and **communicate** with them appropriately

To appraise and give **feedback** on both work and learning

To develop **mutual support**

# Conclusions and Recommendations

The same management style and capability improve **learning in the workplace, retention of staff and quality improvement. Managers need training** for promoting all three outcomes in an integrated manner.

Hence **the organization needs to develop effective approaches to planning, conducting and evaluating such training, and ways of encouraging and supporting managers in this new role.**

This approach should be an **integral part of management development and appraisal** in both private and public sector organisations, and **incorporated into Management Qualifications.**