

**Table A.5 Types of learning and research along the Reflective Cycle**

	Single loop learning	Double loop learning	Triple loop learning
1. Problem: When to use	For simple issues with causal order	For complicated non-programmable issues	To innovate and create previously unimagined possibilities
	When the answer/solution is known	When a problem is well-defined	When breakthrough thinking is needed
2. Problem definition: Nature of the problem	Small, technical and/or personal	Organisational	Systemic
3. Diagnosis: Main questions	'Are we doing things right?'	'Are we doing the right things?'	'Are we doing the right things right?' and 'How do we know/decide what is right/best?'
4. Design: Nature of change	First order change: Incremental	Second order change: Reform	Third order change: Transformation
5. Implementation: Orientation	Following the rules	Changing the rules	Learning about learning
	Procedures or rules	Insights and patterns	Principles
6. Implementation/Evaluation: Type of action	Enacting/applying known approaches/solutions	Reflection and learning, critical analysis	Unlearning and relearning

Sources: based on Wadell, 2011 and www.thorsten.org/wiki (consulted September 2011)