



Faculty of Design

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## Gordon Rowland: Systemic Design as an Explanation of Powerful Learning Experience

Rowland, Gordon

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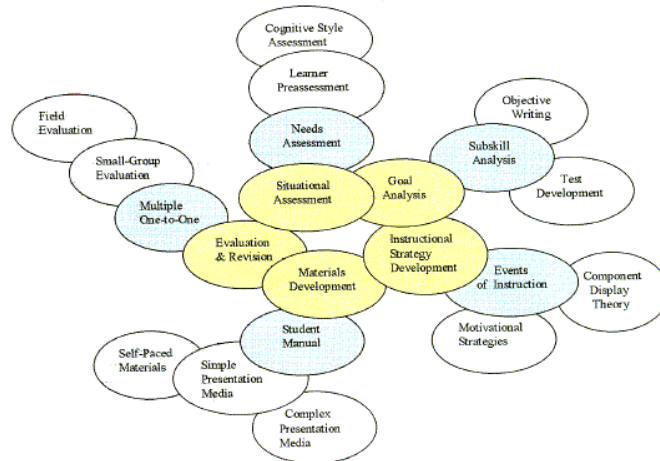
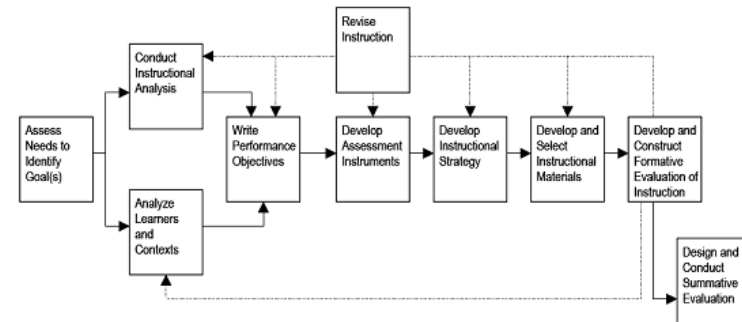
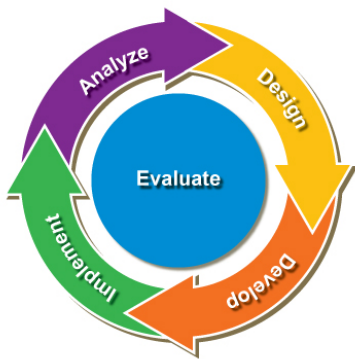
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# **Systemic Design as an Explanation of Powerful Learning Experience**

Gordon Rowland  
Ithaca College

# Instructional Development Models



# Powerful Learning Experience

A learning experience that stands out in memory because of its high quality, impact on one's thoughts and actions over time, and transfer to a wide range of contexts and circumstances

# Themes

- active learning in authentic settings
- relationship with other(s)
- reflection in and on action
- unique combinations and individual outcomes

# Links to theory

- social constructivism
- transformative learning
- complexity

# Sea Education Association

- Sea Semester: Marine Biodiversity and Conservation
- interviews before and after
- participant observation on voyage
- reflective journal, member check, peer debrief



# Themes



- Setting – uniqueness, authenticity, strength of culture
- People – shared fascination, openness, helping relationships
- Processes – sustained focus on learning, intense engagement
- Outcomes – individual outcomes



# Approach

- hands-on learning by doing
- authentic situations and tasks
- primarily movement from concrete to abstract
- logical progression of expectations and standards
- embrace of uncertainty and error as learning opportunities
- continuous monitoring and adaptation
- inquiry-based processes of self-monitoring and questioning
- social processes of learning from and with others
- individualization and flexibility to different communication and learning styles

# Student states and instructor responses

Student	Instructor
1. <i>Attraction</i> (want to do it but don't know how), enthusiasm, uncertainty	<i>Demonstration</i> & information (spoken, referral to sources)
2. Initial <i>attempt(s)</i> , partial success, error(s)	<i>Encouragement &amp; correction</i> , confidence (certainty they can do it)
3. <i>Contribution</i> , success	<i>Praise &amp; pointers</i> for practice
4. <i>Competence</i> , accomplishment	<i>Confirmation</i> (I knew you could do it)
5. <i>Habit</i> (habitual action), pride	Silence, <i>shared pride</i>

# Interpretations

social constructivism

complexity

design

systemic design



## **Systemic design as epistemology ... toward a theory of powerful learning? Sample questions:**

- What if we thought of interactions in learning systems as design actions of people acting as their own and each others' client?
- What if teachers were prepared to foster complexification by defining and imposing productive constraints?
- What if we sought Goldilocks conditions for learning informed by the law of requisite variety (Ashby) and the heuristic of overconceptualization and underspecification (Weick)?
- What if we thought of learning systems as means to consciously evolve (Banathy)?

**Thank you. Thoughts? Questions?**

