Note: This summary of the ARCS model was prepared for the IPFW CELT workshop from documents of John Keller, who created the model, and from resources cited herein.

ARCS — "Motivation consists of the amount of effort a person is willing to exert in pursuit of a goal" (Keller, 2006a, ¶3), and in the context of learning, "motivational tactics have to support instructional goals" (Keller, 2006b, ¶7). For this purpose, instruction can be designed to enhance four *learner motivation* categories.

- Attention (A) Arouse student curiosity and interest.
- Relevance (R) Relate to student's experiences and needs.
- Confidence (C) Scaffold student's success of meaningful tasks.
- Satisfaction (S) Build student's sense of reward and achievement.

Note: "Keller (1979) based his emphasis on motivation for the design of instruction on a combination of theories, including: (1) Bandura's Self-Efficacy (1977), (2) Berlyne's Curiosity and Arousal (1965), (3) Maslow's Needs Hierarchy (1954), (4) McCelland's Achievement Motivation (1976), (5) Rotter's Locus of Control (1975), and (6) Seligman's Learned Helplessness (1975) to substantiate motivating factors for learners."

— Shellnut,1998 (with preface by John Keller, June 2006).

Attention — Arouse student curiosity and interest in three ways (Keller, 2006a, ¶4; Carr & Carr, 2000).

- (1) Stimulate perceptions (surprise, uncertainty, novelty, juxtapositions).
- (2) Engage inquiry (puzzles, questions, problems, dilemmas).
- (3) Create variety (different kinds of examples, models, exercises, and presentation modalities).

Examples (Learning-Theories.com, ¶1):

incongruity, conflict; games, roleplay, hands-on/minds-on methods; questions, problems, brainstorming; videos, mini-discussion groups, lectures, visual stimuli, story-telling

Reflection:

How does an instructor's *enthusiasm* change attention?

Relevance — Relate to student's experiences and needs in three ways (Keller, 2006a, ¶4; Carr & Carr, 2000).

- (1) Orient students to useful goals (identify goals and explain their purpose, allow students to select or define goals, give examples of goals, explicitly state or show value of goals).
- (2) Match student motives (adapt to preferences for what students want to cover or how to cover it, include benefits that match student interests and needs).
- (3) Connect to something familiar (use concrete familiar language and communication modalities, relate goals to something familiar such as prior knowledge or experiences).

Examples (Carr & Carr, 2000; Learning-Theories.com):

paraphrase content, use metaphors, give examples, ask students to give examples from their own experiences, use concept map or outline, give students choice in how to organize what they learn, explain how the new learning will use students' existing skills, explain or show "What will the subject matter do for me today?...tomorrow?"

Reflection:

How do teaching models, field trips, portfolios, and student choice change relevance?

Confidence — Scaffold student's success of meaningful tasks in three ways (Keller, 2006a, ¶4; Carr & Carr, 2000).

- (1) Set learning requirements (set clear goals, standards, requirements, and evaluative criteria).
- (2) Create success opportunities (give challenging and meaningful opportunities for successful achievement within available time, resources, and effort).
- (3) Encourage personal control (show or explain how the students' own effort determines success how personal responsibility connects directly to achievement).

Examples (Carr & Carr, 2000; Learning-Theories.com):

allow students to choose goals, allow small steps for achievement, give feedback and support, provide learners with some degree of control over their learning and assessment, show that success is a direct result of students' personal effort, give confirmatory-corrective-informative-analytical feedback rather than social praise,

Reflection:

How do clear *organization* and *easy to use* materials change expectations for success?

Satisfaction — Build student's sense of reward and achievement in three ways (Keller, 2006a, ¶4; Carr & Carr, 2000).

- (1) Support intrinsic and natural consequences (learning applied in real world or simulated context with consequences).
- (2) Provide extrinsic and positive consequences (feedback after practice to confirm, analyze, or correct performance).
- (3) Apply equity in learning and assessment (consistent consequences for meeting standard consistent evaluation criteria).

Examples (Carr & Carr, 2000; Learning-Theories.com; Small, 1997):

avoid over-rewarding easy tasks, give more informative feedback rather than praise or entertainment value; use practical examples related to students' interests; award certificates for mastery of skills; provide testimonials from previous students about value of the learning; give evaluative feedback using equitable criteria

Reflection:

Why does social praise not work as well as informative feedback in creating satisfaction? How do rubrics change satisfaction?

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