Analyses of the Instructional Motivation Needs of Adults

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Abstract: Previous studies support the ARCS model and were used to develop a Needs Assessment Instrument and the Adult Learner-Instruction Interaction Motivation Model, Each of these can be used to effectively plan for the motivational needs of adult learners. Specific strategies for addressing the needs of older learners are also provided.

Resume: Des etudes anterieures soutenant la validite du modele «ARCS» ont servi de base pour ('elaboration d'un instrument devaluation des besoins et d'un modeled'enselgnementtheoriqued'interactionetdemotivatlonpourl'apprenant adulte. Chacun de ces modeles peut tres bien etre utilise pour pourvoir aux besoins et 6: la motivation de l'apprenant adulte. Des strategies specif lques s'adressant aux besoins des etudiants plus 6ges sont egalement fournies.

INTRODUCTION

Historically a number of researchers (Aslanian & Brickel, 1980; Cross, 1981; Houle, 1961; Knowles, 1980; Zemke & Zemke, 1981) have suggested that adult learners have very specific motivational needs in instructional settings. Life experiences (Knowles, 1980), life transitions (Cross, 1981), or learned attitudes over time (Wlodkowski, 1985) have all been suggested as contributing to these somewhat different requirements. As a result, these authors recommend that instruction for adult learners be designed differently from other types of instruction. While well-designed instruction may be effective for most learners, adults usually are not socialized to the culture of the typical classroom. As such, motivation can be very different for these adults as compared to traditional, younger students.

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MOTIVATIONAL INSTRUCTIONAL DESIGN

Instructional motivation attracts learners to the instruction and increases their effort in relation to the subject (Keller, 1983). Instructional motivation, by this definition, has two main components: it is interesting and effort generating. This type of instruction, therefore, has appeal or interest for the learner and stimulates learner effort. This dual characteristic of instructional motivation has been supported in previous studies (Bohlin, Milheim, & Viechnicki, 1990a & b).

Keller (1987), Keller and Kopp (1987), and Keller and Suzuki (1988) identify four categories of motivational strategies in learning situations: Attention, Ttelevance, Confidence, and Satisfaction (ARCS). To facilitate continuing motivation, strategies in these four categories should be addressed. While the instructor typically cannot control the learners' characteristics (such as expectancy for success), the instructor usually has control over the methods or strategies of instruction, which in turn produce various instructional consequences. The consequences, resulting from the interaction of the methods with the learner's characteristics, are termed "outcomes." The ARCS model, therefore, contains specific methods or *strategies,* that are aimed at producing motivational outcomes, when learners are experiencing specific *conditions,* such as interest or motives.

The initial requirement for motivating instruction is to gain and maintain the *attention* of the learner. This can be achieved through procedures that increase curiosity, interest, or by using techniques such as arousal through humor, variety, or enthusiasm. Second, the instruction must have a perceived *relevance* to the personal needs of the learner. These personal needs can be met by matching the instruction to learners' goals, making the benefits clear, and keeping the challenge level appropriate. Next the instruction must provide for the confidence of the learner. This relates to the learner's expectancy for success or failure, which influences the actual effort and performance, and can be increased by strategies such as clearly indicating the requirements for success, providing a low risk environment, and giving accurate attributional feedback. Lastly, the instruction should promote individual *satisfaction* in order to facilitate continuing motivation. Learners must perceive the rewards gained as appropriate and consistent with their expectations. Learner satisfaction can be promoted by providing appropriate recognition for success, giving informative and corrective feedback, and other similar strategies.

Although the literature is abundant with suggestions about the needs of adult learners, there appears to be little aimed at the design of instruction that meets the motivational needs of adults. While the ARCS model is intended for all types of learners, the data to support it were originally collected in K-12 classrooms. This potential limitation of the ARCS model, is met by the Course Effort Survey Revised (CESR) and the Adult Learner-Instruction Interaction Motivation Model. These can help designers of adult instruction and materials to create more motivating products.

NEEDS ASSESSMENT INSTRUMENT

The needs assessment instrument was developed through a series of revisions (Bohlin, Milheim, & Viechnicki, 1990a; Bohlin, Milheim, & Viechnicki, 1990b; and Viechnicki, Bohlin, & Milheim, 1990) of an original instrument developed by Keller and Subhiyah (1987) to evaluate the degree of motivation effects of instructional materials. After rewording or deleting those items not consistent with the evaluation of classroom instruction, several items were added which were identified in the literature as important to the instructional motivation of older learners.

The final product, the CESR, has been used to assess the instructional needs of generalized adult populations (Bohlin, Milheim, & Viechnicki, 1990b; Bohlin, Milheim, & Viechnicki, 1993b; and Viechnicki, Bohlin, & Milheim, 1990). The purpose of this instrument is to identify the instructional motivation needs of learners. As such it is not intended to be a psychometric instrument, rather it is simply a needs-assessment tool. The CESR is composed of 42 items, which are a selection of strategies which have been identified in the literature as having motivational effects on various learners (See Table 1).

The instrument can be used to determine the motivational needs of specific individuals or of specific groups. It can also be used to measure the needs of a representative group of a population with the intent of obtaining generalizable prescriptions for that population. This information can then be used as a framework for planning and designing instructional strategies for motivating that adult population.

ADULTS' GENERAL MOTIVATIONAL NEEDS

Analysis of the items ranked highest by the adults from a variety of instructional settings have shown especially important motivational strategies (Bohlin, Milheim, & Viechnicki, 1993b). While some were specific to improved interest or to improved effort, others were rated important to both. A listing of the highly rated items follows, with the letter and number identifying the subscale and item number from Table 1.

Strategies rated very important specifically to *interest:*

A2 Content captures my attention
A3 Makes the subject matter seem important
R2 Allows time for practical application of the content
CIO Instructor models and demonstrates proper skills during instruction

Strategies rated very important specifically to *effort:*

C4 Whether or not I succeed is up to me
S2 Can set and achieve high standards of excellence
S4 Instructor's evaluations of my work match how well I think I have done

Table 1

Content of Items in the Course Effort Survey (CES) by Subscale

Attention

1 Makes me feel enthusiastic about subject
2 Content captures my attention
3 Makes the subject matter seem important
4 Shows how the content relates to things I already know
5 Uses humor during instruction
6 Makes me feel curious about the subject matter
7 Does unusual or surprising things that are interesting
8 Uses an interesting variety of teaching techniques
9 Curiosity is often stimulated by the questions asked or the problems given

Relevance

1 Information I learn will be useful to me
2 Allows time for practical application of the content
3 Benefit from the knowledge acquired in the class
4 Actively participate in the class
5 Positive role models be presented to me in class
6 Is flexible to meet my needs in content and assignments
7 Personal benefits of the course are made clear to me
8 Challenge level is about right
9 Have some input or choice in content and assignments
10 Get a chance to work with other people in the class
11 Content relates to my expectations and goals
12 Personally benefit from what I learn in the class

Confidence

1 Helps me feel confident that I can do well
2 Makes me feel I have the ability to succeed
3 Builds my self-esteem
4 Whether or not I succeed is up to me
5 Creates a relaxed classroom atmosphere
6 Requirements for success are made clear to me
7 Frequent opportunities to succeed
8 Helps me to believe I can succeed if I try hard enough
9 Get enough timely feedback to know how well I am doing
10 Instructor models and demonstrates proper skills during instruction
11 Non-threatening
12 Designed so that everyone can succeed

Satisfaction

1 Gives me a lot of satisfaction
2 Can set and achieve high standards of excellence
3 Fair recognition compared to other students
4 Instructor's evaluations of my work match how well I think I have done
5 Helps me to accomplish my own personal goals
6 Feel satisfied with how the class is run
7 Get enough recognition for my work through feedback
8 Amount of work I have to do is appropriate
9 Feel satisfied with what I learn

Strategies rated very important both to *interest* and *effort:*

- A1 Makes me feel enthusiastic about subject
- R1 * Information I learn will be useful to me
- R3 * Benefit from the knowledge acquired in the class
- R12 Personally benefit from what I learn in the class
- C6 * Requirements for success are made clear to me
- C7 Frequent opportunities to succeed
- C9 Get enough timely feedback to know how well I am doing
- 58 Amount of work I have to do is appropriate
- 59 Feel satisfied with what I learn

*The three highest-rated strategies

INTERACTION MOTIVATION MODEL

Results of factor analyses (Bohlin, Milheim, & Viechnicki, 1993a) provide additional support for the four categories of strategies proposed by the ARCS model — Confidence, Relevance, Attention, and Satisfaction, respectively. Further analysis of these results has produced a revised model of motivational adult learner-instruction interaction. This model provides the most important elements of the instructional environment, characteristics of the learners, and the resulting outcomes of their interaction (See Figure 1). While Keller does not use the ARCS categories to classify instructional outcomes, it does seem appropriate to use these category names for the consequences of the instruction-learner interaction. The strategies in the four categories are, in fact, aimed at maintaining the learners' attention, perceptions of relevance, expectancy for success, and satisfaction.

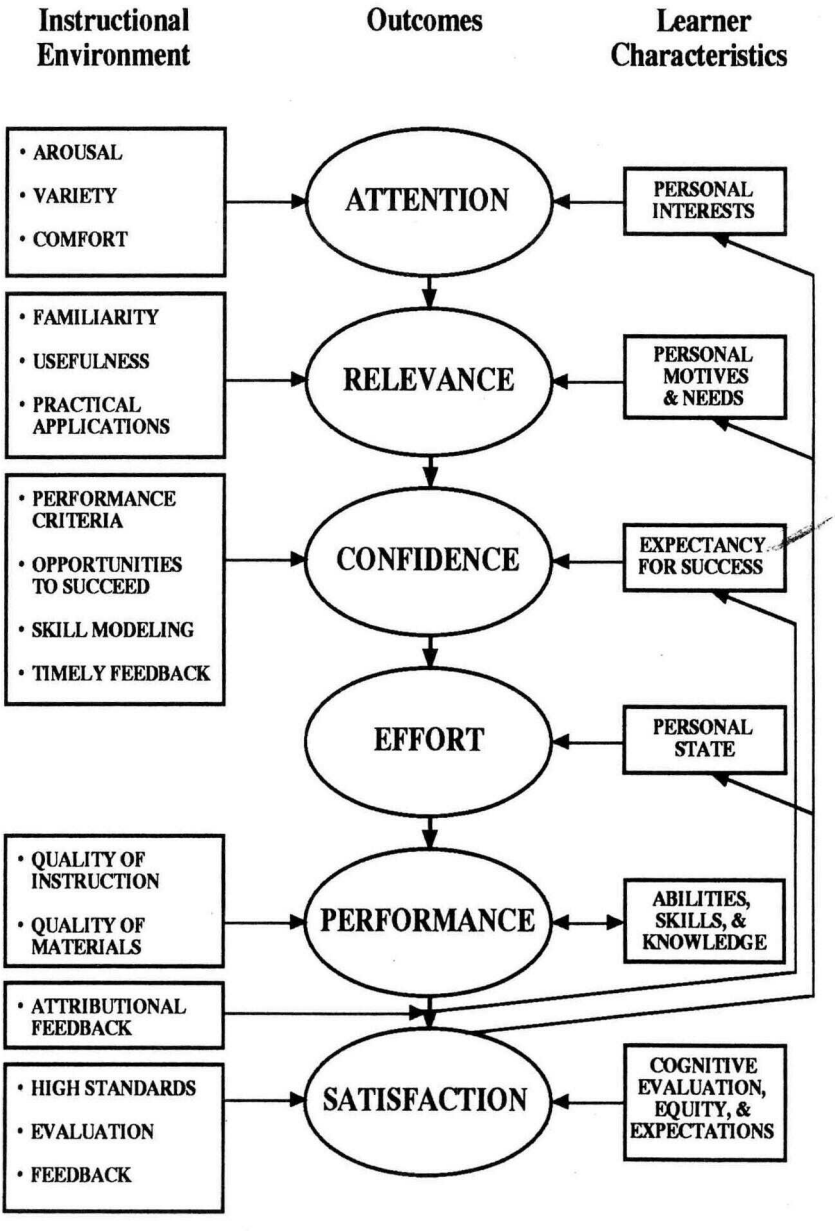
The Adult Learner-Instruction Interaction Motivation Model, therefore, uses the ARCS categories to classify the outcomes of the instruction. The model also represents the relationships among specific instructional strategies, learner conditions, and outcomes for adults. This model may provide a framework for research, theory and hypothesis building, and the development of instruction regarding adult learners.

EDUCATIONAL TECHNOLOGY APPLICATIONS

This model can be applied in a variety of ways. First, if possible the CESR should be used as a needs assessment instrument. This can best determine the specific needs of the target adult group. If it is not practical to administer it to a sample of your target group, then it would be best to use the following generalized prescriptions.

When designing instruction for adults in a content area or an environment that is not intrinsically appealing, the designer should follow these guidelines:

Figure 1.
Revised Adult Learner-Instruction Interaction Motivation Model



1. Design the surroundings, the instruction, and the assessment in ways that are non-threatening (e.g., add individualized materials and small cooperative groups to the instruction to help give the feeling of support and low risk). This will make the learning more comfortable.
2. Provide the learner with some control over instruction and assessment (e.g., allow the learners to prescribe.the size of the chunks of learning between tests, give the learners opportunities to apply the content in ways that are relevant to them). This will improve the confidence level, and degree of satisfaction.
3. Design the instruction so that the learners are regularly reminded that the content is challenging, but not so difficult to undermine confidence. This will raise the adults learners' satisfaction with their accomplishments.
4. Design the instruction so that it specifically demonstrates the usefulness of the learned content (e.g., showing applications in the real world, challenging the learners to find ways to apply the knowledge to their lives). Real world applications satisfy the relevance to the learners' needs.
5. Provide for ways that clearly describe the learning and clearly explain the requirements for successful completion of the unit (e.g., list the goals at the beginning, outline the topics and sequence to be covered, state specific levels of outcome performance and the percent of learners who accomplish it on their first try). This will also increase the learners' expectancy for personal success.
6. Design the instruction so that it builds on any naturally interesting aspects of the content (e.g., present mysteries or paradoxes in the subject area, use inquiry questions, use high-level open-ended questions where possible). This will increase learners' arousal and interest.

When designing instruction and materials for adults who may not give forth as much effort as desired, the designer should plan the instruction to follow some of these guidelines:

1. Design the instruction to improve the learners' confidence levels (e.g., start with easier problems and slowly increase task difficulty, slowly build the level of the inquiry questions). This will improve the learners' expectancy for success.
2. Provide feedback that links success to ability and effort (e.g., "See! You can do it when you work at it!" 'Yes, you know how to do it!"). If not overdone, this can provide for internal attribution which can raise the expectancy for success of the learner.
3. Provide feedback that helps the learner feel supported (e.g., "Let me try explaining this again, I know *we* can do better," assure the learner that they can try things as often as they need to hi order to learn the material).

This can make the learning environment more comfortable and increase persistence.

4. Design the instruction so that it connects to the learners' real-life situations (e.g., use examples in their everyday jobs, let them use applications in their personal lives). This helps to make the learning more relevant and the products more useful.

CONCLUSION

There are many ways that this model can be applied to the design of motivating instruction for adult learners. The designer should focus on the needs of the adult learner as outlined in the previous section, and creatively design interventions, feedback, screen designs, and program structures that make the learning more appealing and the learner more confident. Although this is motivational for most learners, these types of strategies are especially important to meet the needs and motives of adult students.

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