

Hoping to Reduce Attrition? Follow the SIEME Model and Investigate Motivation-Hygiene Factors

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Do you know how many students have enrolled in your distance education (DE) program and how many of them have actually completed it? Is the attrition rate acceptable or too high? Should you put efforts into reducing the attrition rate? What is an effective method for reducing the attrition rate? How will you know if your interventions have worked or not? This article provides information helpful for answering those important questions.

The number of DE programs offered at degree-granting educational institutions has rapidly increased over the last decade. According to the National Center for Education Statistics (1997, 2003), 753,640 students formally enrolled in DE courses in the 1994-1995 academic year. Six years later, during the 2000-2001 academic year, 55% of 2-year or 4-year degree-granting educational institutions offered credit-granting undergraduate-level or graduate-level DE courses, which generated about 2.8 million enrollments.

However, as the number of enrollments in DE grew, so did the number of dropouts (e.g., Terri, 2001). DE institutions need to look for an effective way of dealing with attrition (Chyung, 2001). Various pieces of anecdotal advice on designing effective DE programs are available (e.g., Croft-Baker, 2001; Howell, 2001; Kerker, 2001), but DE practitioners still need a more sound and convincing answer to the question, “What is a *systematic* approach to dealing with attrition issues in DE programs?” It is easy for distance educators to assume that a solution to an attrition problem is to *motivate* learners. For example, an author writes, “a high drop out rate from such courses is a clue that this system of education requires additional efforts on the part of educators to motivate their students” (Jain, 2002). Unfortunately, that statement is missing a critical step – it is important to investigate various factors that might have contributed to the high attrition rate *before* jumping to conclusions and implementing potentially costly or ineffective interventions to *motivate* students. This article will explain a systematic approach to dealing with attrition in DE using a systematic approach based on the SIEME model.

A Systematic Approach to Dealing With Attrition

1. Separate Unhealthy Attrition and Healthy Attrition

A *systematic* approach to dealing with attrition in DE starts with a clear understanding about the issue itself. First, DE institutions should clearly define attrition. Most ‘dropout’ research studies reported in the literature deal with attrition within a course (e.g., Muse, 2003; Washull, 2001; Xenos, Pierrakeas, & Pintelas, 2002). However, an increasing number of institutions are offering their entire degree program via a distance method; therefore, attrition should be defined and analyzed on two different levels – attrition on a course level and attrition on an entire degree program level. Second, DE institutions should determine whether they have an attrition *problem* or not. Statistics can be misleading if the metrics and variables are not clearly defined. For example, is an attrition rate of 46% on a program level acceptable or is it a problem? DE institutions need to study more about their dropouts before making a judgment since there are various reasons for students to drop out of a DE program. Consider these possibilities: One attrition group might include non-major students who took DE program courses as electives. One attrition group might have decided to attend traditional classroom-delivered courses when such opportunities were

available. Another attrition group might have misjudged their educational goals and enrolled in a DE program only to find out that it did not match their educational goals. In such cases, dropouts are expected, inevitable or even encouraged. Such cases are *healthy attrition*. But in other circumstances, DE institutions may find problematic symptoms such as students' complaints about poorly designed instruction, poor quality of instructors, or lack of student support services. These symptoms may contribute to resulting in *unhealthy attrition*, which should concern DE institutions. Symptoms of unhealthy attrition call for further in-depth investigations. Unhealthy attrition can be avoided if the DE institution pays careful attention to the symptoms and implements adequate interventions proactively.

2. Investigate Hygiene Factors and Motivation Factors

The next step in a systematic approach is to identify and analyze factors that may contribute to unhealthy attrition and factors that can contribute to DE students' motivation. A helpful theory to apply when investigating such factors is Herzberg's motivation-hygiene factor theory, which was originally developed from examining employee job attitudes (Herzberg, 1966). Herzberg and his colleagues concluded from their research that the opposite of satisfaction on the job was not dissatisfaction as seen in a two-sided coin, but rather the opposite of satisfaction was no satisfaction and the opposite of dissatisfaction was no dissatisfaction. They called factors that caused job satisfaction *motivation factors* and factors that caused job dissatisfaction *hygiene factors*. Motivation factors include achievement, recognition for achievement, work itself, responsibility, advancement, and growth. Hygiene factors include company policy and administration, supervision, relationship with supervisor, work conditions, salary, relationship with peers, personal life, relationship with subordinates, status, and security (Herzberg, 1987).

The motivation-hygiene factor theory can be used as a theoretical framework for investigating motivation and hygiene factors in DE environments. Course evaluation data are a good source of information to be used in such investigations. For example, the author of this article conducted a content analysis of course evaluation data obtained from 17 graduate-level, instructor-led, asynchronous online courses taught at a university in the northwestern region of the United States between Fall 1999 and Spring 2003 ($N=228$). The analysis methods used in the research were similar, but not identical, to the ones that Herzberg and his colleagues utilized in their research (see Chyung & Vachon, 2004). After analyzing students' responses to the non-directional open-ended questions included in the course evaluation questionnaire (i.e., Overall, how would you rate the quality of this course? Please explain. Overall, how would you rate the quality of the instructor? Please explain.), 593 'thought units' were identified. The identified thought units were grouped into 19 categories according to their similarities, and the degree and the direction of students' attitudinal status toward their DE courses were determined based on the frequency of positive and negative thought units. Finally, using a cluster analysis, two clusters of motivation-hygiene profiles were formulated as shown in Table 1. The number in parentheses indicates the frequency of the item.

3-4. Eliminate or Reduce the Hygiene Factors & Maintain and/or Add Motivation Factors

Once motivation-hygiene profiles are developed, it is critical for the DE institution to remove, or improve the condition of, the hygiene factors potentially contributing to unhealthy attrition. However, improving the condition of the hygiene factors may not necessarily help motivate DE students; a different set of strategies may be required for motivation. It is also important that hygiene factors be dealt with *before* implementing new motivation factors since a distance learning environment with serious hygiene factors will cause dissatisfaction despite a positive effect of the motivation factors. For example, based on the findings of the content analysis described above, the top priority should be put on the two items listed in Cluster#1 of hygiene factors: i.e., to increase the online instructor's participation level and to provide students with clearly described directions and expectations. Confusion and frustration created by the two hygiene factors may cancel out the positive effects of the four items listed in Cluster#1 of motivation factors.

Table 1. *Motivation-Hygiene Profiles in DE Context*

Hygiene factors	Motivation factors
Cluster#1	Cluster #1
Instructor's participation level (29) Instructional directions/expectations (27)	(59) Learning content itself (50) Instructor's teaching methods/styles (47) Instructor's subject matter expertise (40) Types of learning activities
Cluster#2	Cluster#2
Types of learning activities (19) Personal feedback from instructor (18) Instructor's teaching methods/styles (15) Effectiveness of instructional design (13) Learning content itself (12) Instructional organization (8) Quality of textbook (8) Interaction among participants (7) Instructor's facilitation skills (6) Instructional workload (6) Learning opportunities or outcomes (5) Instructor's online characteristics (4) Instructor's responsiveness on line (2) Instructor's technical skills (2) Rapport with instructor (1) Instructor's willingness to help (0) Instructor's subject matter expertise (0)	(28) Instructor's online characteristics (27) Learning opportunities or outcomes (26) Personal feedback from instructor (20) Quality of textbook (17) Instructor's willingness to help (15) Instructional directions/expectations (12) Instructor's responsiveness on line (9) Instructor's facilitation skills (9) Instructional organization (7) Instructor's participation level (7) Effectiveness of instructional design (4) Interaction among participants (3) Instructor's technical skills (0) Rapport with instructor (0) Instructional workload

5. Evaluate Attrition in DE Continuously

DE institutions should develop a checklist or questionnaire using their motivation-hygiene profiles and continue to monitor changes, even subtle ones, in motivation-hygiene factors. Continuous evaluations on the outcomes will help them avoid ignoring existing hygiene factors and help them maintain motivation factors in their DE environment. Presented in Table 2 is a sample motivation-hygiene questionnaire developed by Chyung and Vachon (2004).

Table 2. A Sample Motivation-Hygiene Questionnaire

	<u>Dissatisfied</u> <u>Satisfied</u>				
1. The individual instructional modules were well designed.	1	2	3	4	5
2. The instructional steps and expectations were clearly described.	1	2	3	4	5
3. The instructional content was relevant to my interests.	1	2	3	4	5
4. The learning activities helped me achieve learning objectives.	1	2	3	4	5
5. The instructor frequently participated and provided students with his/her input during class discussions.	1	2	3	4	5
6. The instructor provided me with personal feedback on my performance in a timely manner.	1	2	3	4	5
7. The quality of instructional materials such as textbook was high.	1	2	3	4	5
8. I learned a lot of new knowledge from the instruction.	1	2	3	4	5
9. The instructor used effective teaching methods or strategies.	1	2	3	4	5
10. The instructor was knowledgeable in the subject matter.	1	2	3	4	5
11. The instructor was willing to help me succeed.	1	2	3	4	5
12. The instructor showed a positive persona in the online class (e.g., caring, supportive, humorous, kind, etc.).	1	2	3	4	5

The SIEME Model

In summary, a *systematic* approach to dealing with an attrition problem in DE includes the following five steps and a graphical illustration of the steps is presented in Figure 1:

1. **S**eparate unhealthy attrition and healthy attrition,
2. **I**nvestigate hygiene and motivation factors,
3. **E**liminate or reduce the hygiene factors,
4. **M**aintain and/or add motivation factors, and
5. **E**valuate attrition in DE continuously.

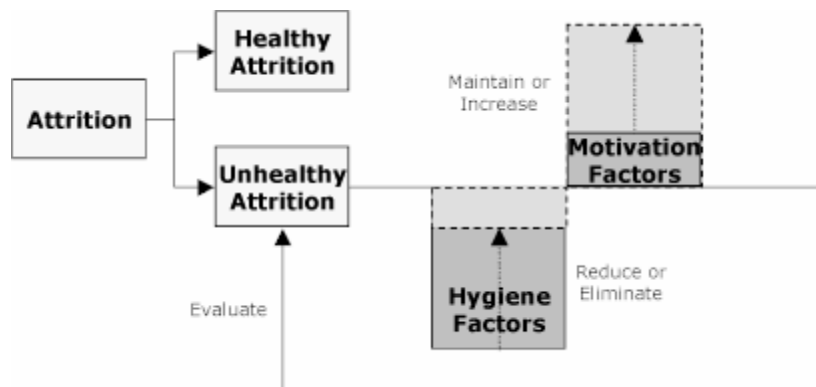


Figure 1. A systematic process of reducing attrition in DE.

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Biographical Sketch

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