

## **Analyze Motivation-Hygiene Factors to Improve Satisfaction Levels of Your Online Training Program**

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### **Introduction**

One of the problems in Internet-delivered online instructional programs is high attrition. Despite the various potential benefits of online instruction, online learners tend to drop out of online instruction much earlier or more frequently than they do in traditional classroom instruction (Kember, 1995). There are various reasons for dropouts. For example, learners may stop attending on line classes because they think they have learned enough. Learners may stop enrolling in online courses because they have financial difficulties to support their continuous education. Learners may quit learning in online instruction because they are not satisfied with their online learning experience. It is critical to analyze the root causes of attrition before designing effective interventions to combat attrition (Chyung, 1999, 2001a, 2001b). If learners express dissatisfaction toward the online programs, the factors that cause dissatisfaction should be further investigated and eliminated. While isolating factors that cause dissatisfaction toward online instruction, it is also important to recognize factors that satisfy online learners and to continue to utilize those motivating strategies in online instruction. A helpful theory that guides such root cause analysis processes is Herzberg's motivation-hygiene theory.

This article is based on a 3-year long online training evaluation case study. In this article, Herzberg's motivation-hygiene theory will be introduced as the theoretical framework. Results obtained from the three-year case study will be presented. Based the results, hygiene factors that cause dissatisfaction toward the online training program and motivation factors that cause satisfaction toward the online training program will be explained. At last, general guidelines for conducting ongoing evaluations and continuously improving the motivational appeal of online training programs will be discussed.

### **Herzberg's Motivation-Hygiene Theory**

In the 1950s, Frederick Herzberg and his colleagues studied factors that affected job attitudes. In one of their studies with engineers and accountants in the Pittsburg, Pennsylvania area, they interviewed individual employees and asked them to describe "sequences of events" happened on the job where they felt exceptionally good or bad about their job. Analyzing the interview data, "thought units" were identified. A thought unit was defined as "a statement about a single event or condition that lead to a feeling, a single characterization of a feeling, or a description of a single effect" (Herzberg, Mausner & Snyderman, 1959, p. 38). Thought units were then categorized according to similarity. The frequency percentage of positively or negatively stated items found in each category of thought units was used to determine the degree and direction of employees' attitudinal status toward their job. From their research, they concluded that there were two different sets of factors that affected positive or negative job attitudes. A set of factors such as achievement, recognition, work itself, responsibility, and advancement affected positive job attitudes. They called such factors motivation factors. Another set of factors such as working conditions, company policies, relations with supervisors, subordinates or coworkers, and pay affected negative job attitudes—they called such factors hygiene factors. The motivation-hygiene theory was established based on the research findings (Herzberg, 1966).

The motivation-hygiene theory has given a new perspective on job attitudes. The traditional perspective on job attitudes was that the opposite of job satisfaction was job dissatisfaction and the opposite of job dissatisfaction was job satisfaction. In other words, removing the causes that make workers feel dissatisfied would help them feel satisfied and removing the causes that help workers feel satisfied would make them feel dissatisfied. Herzberg's motivation-hygiene theory suggests that it is not true. In his theory, Herzberg explains that the opposite of satisfaction is not dissatisfaction but no satisfaction (i.e., neutral to either satisfaction or dissatisfaction), and the opposite of dissatisfaction is not satisfaction, but no dissatisfaction (i.e., neutral to either satisfaction or dissatisfaction). When the condition of hygiene factors deteriorates to a level where employees perceive it to be unacceptable, it causes job dissatisfaction. But improving the condition of hygiene factors to an optimal level does not cause job satisfaction. It is primarily the motivation factors that improve employees' job satisfaction (Herzberg, 1966, 1974).

## **Applying Motivation-Hygiene Theory to Online Training Programs**

The conceptual model presented in Herzberg's motivation-hygiene theory that distinguishes hygienic and motivational factors that affect job attitudes is applicable to analyzing learners' attitudes toward online training programs.

In order to help online learners develop positive attitudes toward online training, one of the first things to do is to analyze what causes them to feel negatively about the online training program and to try to improve the condition of those hygiene factors. While maintaining the condition of the hygiene factors on an acceptable level, online instructors should recognize factors that tend to help online learners feel satisfied with the online training program and continue to utilize those motivating instructional strategies. When maintenance strategies and motivational strategies are systematically implemented, online learners' satisfaction levels will improve.

Described in the following section is a 3-year long case study conducted at Boise State University's Instructional & Performance Technology department. Similar methodologies used in Herzberg's research were adopted in the case study in order to reveal motivation factors that affect learners' positive attitudes toward online training and hygiene factors that affect negative attitudes toward online training.

### **Case Study: Analyzing Attitudes Toward Online Instruction**

The Instructional & Performance Technology (IPT) department of the College of Engineering at Boise State University offers its entire master's degree program on line. The IPT online courses are delivered via Lotus Notes. The IPT department provides a week-long asynchronous online technical training program (a.k.a., IPT Boot Camp) to new online participants prior to their first semester. The IPT Boot Camp program is designed to teach them basic technical knowledge and skills for using Lotus Notes in IPT online course databases, and help them feel confident and become successful online learners (see Figure 1).

The IPT Boot Camp program is delivered a week prior to the first day of each of Spring, Summer and Fall semesters. Between Spring semester, 2000 and Summer session, 2002, eight (8) IPT Boot Camp programs were delivered to new online participants. At the end of each IPT Boot Camp program, the IPT Boot Camp evaluation was administered via the web. The evaluation questionnaire consisted of the following forced-choice questions (using a 5-point Likert scale) and open-ended questions.

- During the IPT Boot Camp, I learned the basic skills to utilize Lotus Notes database features. SD D N A SA
- The IPT Boot Camp task directions were clearly stated. SD D N A SA
- The number of tasks provided in the IPT Boot Camp was appropriate. SD D N A SA
- I feel prepared to use Lotus Notes database as a learning tool for my first IPT online course. SD D N A SA
- The IPT Boot Camp experience was valuable to me. SD D N A SA
- While you were completing the IPT Boot Camp tasks, was there a frustrating moment? If so, please describe.
- What components of the IPT Boot Camp program are you satisfied with? Please describe.
- Please provide any other comments you have about the current IPT Boot Camp program, or suggestions you may have for future IPT Boot Camp sessions.

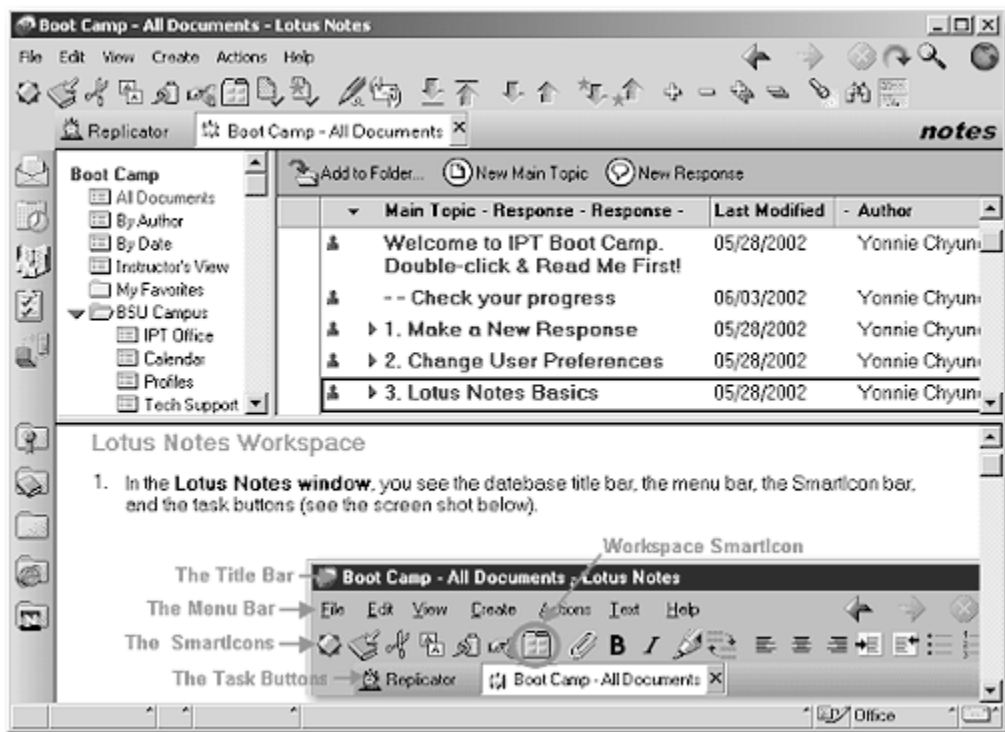


Figure 1. A Screen Shot from the IPT Boot Camp Database

Table 1. *Demographic Information of the IPT Boot Camp Evaluations*

Year	2000			2001			2002		Total	
	Semester	Spring	Summer	Fall	Spring	Summer	Fall	Spring		Summer
Number of IPT Boot Camp Evaluation Respondents		14	9	29	44	17	32	46	19	210
Number of IPT Boot Camp Participants		53	16	38	48	17	32	46	19	269
IPT Boot Camp Evaluation Return Rate		26.4%	56.3%	76.3%	91.7%	100%	100%	100%	100%	78.1%

Two hundred ten (210) out of 269 IPT Boot Camp participants during the eight (8) IPT Boot Camp programs from Spring 2000 and Summer 2002 responded to the IPT Boot Camp Evaluation questionnaire (see Table 1). By analyzing responses to the open-ended questions, 'thought units' were identified. The thought units were then sorted into different categories according to their similarity. Events that affected learners to feel negatively during the IPT Boot Camp program were identified as hygiene factors. Events that helped them feel satisfied with the IPT Boot Camp program were identified as motivation factors (see Table 2).

Table 2. *Motivation Factors and Hygiene Factors Found in IPT Boot Camp* (Based on Responses to Open-ended Questions)

<b>Motivation Factors</b>	<ul style="list-style-type: none"> <li>• Learning itself (i.e., learning new software)</li> <li>• Feelings of confidence (e.g., feeling prepared to start a new online program; getting more familiar with the environment)</li> <li>• Effectiveness of instructional materials (e.g., clearly written, well structured, easy to follow, multimedia)</li> <li>• Social Interactions (e.g., opportunities to interact with other participants)</li> <li>• Instructional feedback provided by the instructor (e.g., the information, the speed)</li> <li>• Flexibility/convenience provided in the learning environment (e.g., alternative Web access, asynchronous method)</li> </ul>
<b>Hygiene Factors</b>	<ul style="list-style-type: none"> <li>• Required amount of time to complete tasks (e.g., long downloading time)</li> <li>• Technology-related events (e.g., unexpected technical problems, a computer crash, a drink spilled on computer, a malfunctioning printer, web browser incompatibility)</li> <li>• Required amount of cognitive effort to complete tasks (e.g., things that made learning more difficult than expected, usually due to the unfamiliarity to or the complexity of the online environment)</li> <li>• Learner preferences on instructional design (e.g., the instructional sequence or the components of media used in instruction)</li> </ul>

### A Summary

Herzberg's motivation-hygiene theory suggests that motivation factors and hygiene factors are two different sets of factors that influence job attitudes. Herzberg explains that motivation factors are related to *what people do* on the job while hygiene factors are related to *the context or environment* in which they do their job. Presence of hygiene factors in a poor condition causes job dissatisfaction and maintaining hygiene factors on an optional level does not necessarily increase job satisfaction levels. Presence of motivation factors influences job satisfaction levels.

The conceptual model presented in Herzberg's motivation-hygiene theory was applied to analyzing factors that affect learners' attitudes toward the IPT Boot Camp program. The 3-year evaluation results seem to support Herzberg's research findings that there are two distinct sets of factors, one of which affects learner satisfaction and the other one of which affects learner dissatisfaction. For example, a long downloading time was identified as a hygiene factor. However, there was no evidence that absence of the poor hygiene condition would increase learners' motivation levels. The evaluation results also support Herzberg's idea that hygiene factors are *maintenance* factors that are environmental (e.g., downloading time, technical problems, etc.) whereas motivation factors are contributors to psychological growth (e.g., confidence, accomplishments, *learning in itself*).

## Recommendations: Rapid Processes of Evaluation and Intervention Design

It is critical to conduct ongoing evaluations on the effectiveness of online training programs for continuous improvement. An evaluation conducted at the end of a program (a.k.a., a rear-end analysis) will reveal learners' perception toward the training program, whether positive or negative. The rear-end analysis data will be fed back to the front-end analysis phase of the following cyclical revision processes and help redesign and improve the quality of the online training program. In order to improve learners' attitudes toward an online training program, it is recommended to implement cyclical rapid processes of conducting an evaluation, analyzing the motivation and hygiene factors, and revising the program accordingly.

Herzberg's motivation-hygiene concept is an effective guideline when analyzing causes of online learner retention and attrition. To be systematic, it is important to put initial effort on improving the condition of hygiene factors before implementing motivational strategies. While maintaining the optimal level of hygiene factors, additional effort should be put in order to improve the motivational appeal of the online instruction. A helpful guideline to enhance the motivational appeal of online instruction is John Keller's ARCS model. Online instruction can be redesigned by addressing the four factors; Attention, relevance, confidence, and satisfaction (for more information about the strategies, see Chyung, 2001b).

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## Biographical Sketch

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