To choose to be Poor Today but Have Good Future Prospects: Consumer Participation in the Development of Information Systems in Healthcare Organizations.

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Introduction

In the Scandinavian countries it has long been a tradition to incorporate consumers as key members of design teams and not see them merely as experimental subjects. Consumer participation in information system development is instead regarded as an important source of benefits, due to the fact that active participation increases effectiveness in the use of the system. However, despite the increasing interest in the importance of consumer participation in information system development projects, few studies have discussed the reasons why risk averse decision-makers in healthcare should be willing to invest in the short run by choosing participative design methods.

Method

Data was collected in a case study of the development of an information system in a small clinical setting. For a period of two weeks, in face-to-face interviews, the healthcare work-team and the designers were asked about the system in use and about the main outcomes obtained from the participation process.

Results

In the initial period, the clinical team acquired first-hand experience and information about the 'physical attributes' of the information system. The information acquired first of all allowed the clinical team to distinguish the functional value of the product (the HIS), and to understand how it would help to easily integrate the healthcare professionals involved with each other. Moreover, participation allowed the primary consumers to work closely with designers in the role as producers of modules, by supplying feedback to practical problems that arose during the design stage. This situation allowed the module producers to present broad specifications for the required module, while engineers developed the detailed specification. A system with these characteristics was consequently considered to be of more value than other potential systems without such attributes.

Comments

When a system development project is initiated, the final quality of the goods (i.e. the information systems) that will be available to the healthcare unit and the subsequent effects on the work-routines cannot be known with certainty. If the information system is not sufficiently appropriate, the economic effects on the organization are more significant than in other situations for two reasons. The first is the irreversibility involved and the other is that clinical organizations can seldom raise unlimited resources to compensate for organizational failures. Consequently, when healthcare organization's managers fear the negative consequences of the information system with regard to the clinical work flow, and if they can find a possibility of shifting these risks, they will engage in activities that allow to them be sure that the system will be adapted to the needs of their organization.

The underlying logic for investing resources in design participation processes is the same as in choosing between ordinary commodities x and y within a single period of time. The risk averse decision-makers in healthcare calculate the present discounted value of the effects accrued over time to the unit and to their patients, and predict the amount of resources they are willing to pay to acquire an "insurance" (such as design participation) that will protect the organization from future losses. In such circumstances, the acquired insurance converts an uncertain outcome into a certain loss (the amount of resources the organization pays for allowing its personnel to actively participate in the development process). It follows that the organization is better off with an insurance if the future negative effect is severe or likely. The benefit for the buyer of the "insurance" who exchanges a risk-filled situation for a riskless, is then substantially greater in terms of gain in utility or wellbeing. Consequently, the organization should be willing to actively contribute out-of-pocket investments in participation in order to screen out a high risk of obtaining a less appropriate system for the clinic.