

## Chapter 5

# Perceived Importance of User Expectations from Healthcare Information Systems

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### ABSTRACT

*Health institutions invest huge amounts in Information Systems (IS). Despite the huge budgets of investments, it is estimated that nearly 60-70% of Information Technology (IT) implementation projects fail in healthcare. In the literature, success factors and the failure reasons have largely been discussed. One of these, both in failure reasons and success factors, is the User Expectations. Expectation Failure, which can be defined as the gap between expectations of the end users from the system and actual performance of it, is introduced as one of the failure reasons of IS. The expectations of users must be well understood and discreetly worked out to design and implement a successful, acceptable, and useful IS. There is no study about the expectations from Healthcare Information System (HCIS) in the literature. The aim of this chapter is to investigate the end user expectations from HIS and their rankings. Seventeen potential end user expectations in four dimensions are examined and ranked according to the importance of expectations to the users.*

### INTRODUCTION

Importance of expectations is clear enough in the success of Information system (IS). The expectations of users must be well understood and discreetly worked out to design and implement a successful, acceptable and useful IS. The expectations, priorities of these expectations, their importance to the users must be well understood. Despite the huge investment amounts, the high

failure rate in Healthcare Information Systems (HCIS) is a big problem. To catch the success, user acceptance is an instrument in information systems and can be provided with high expectation meeting ratios. That will lead higher usage ratios, resulting in successful IS implementations.

Despite this fact, there is no dedicated study about the expectations from HCIS, user expectations from IS are great interest to the researchers. The purposes of the study are; to examine the end

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user expectations from HCIS and their relative importance, to explore the ranking of expectations according to the importance both for all users and for different titled users.

## **BACKGROUND**

Not only in healthcare institutions, but in all, doing the daily work without an information system (IS) is almost impossible in our era. An IS is not only a way of recording the operations made by the employees, in the recent technology. Today, the users expect more than e-recording, from IS. Taking into account the complexity of the healthcare, we need serious features in HCIS'. That is why healthcare institutions (HI) invest huge amounts in information systems. Literature tells that the amount of investment made in HCIS is not directly proportional with positive effects, many negative effects of IT implementation in HCIS are available (De Keizer & Ammenwerth, 2008). Literature also tells, despite the unquestionable need to IS, and huge budgets of investments, it is estimated that nearly 60-70% of software projects fail in healthcare (Ammenwerth, Iller & Mahler, 2006).

Literature is very well concerned about the success factors and failure reasons of IS. There are many studies about the success factors and failure reasons. In this chapter, we only deal with the factors and reasons, directly related to the subject of the chapter; the User Expectations.

The success factor related to the User Expectations is user satisfaction. It is one of the most studied success factor of IS in the literature. It is presented as an element of system success first by Cyert and March (1963). Collins dictionary defines satisfaction as (Despont-Gros, Mueller & Lovis, 2005)

- The act of satisfying or state of being satisfied.

- The fulfillment of a desire.
- The pleasure obtained from such fulfillment.
- A source of fulfillment.

Seddon (1997) defines user satisfaction as “a subjective evaluation of the various consequences evaluated on a pleasant –unpleasant continuum”. Gelderman (1998) defines user satisfaction as “the extent to which information requirements are met”. Similarly, Ives, Olson & Baroudi's (1983) definition of ‘user information satisfaction’ is “the extent to which users believe the information system available to them, meets their information requirements”.

Drawing from the definitions, it is clear that satisfaction is directly dependent on expectations, so does the IS satisfaction. As seen in the definitions given above, satisfaction occurs when the expectations are met. User expectations have great influence on user satisfaction with IS. The influence of user expectations on user satisfaction is proved by many studies in the literature (Conrath & Mignen, 1990; Delone & Mclean, 2004; Adam Mahmood, Burn, Gemoets & Jacquez, 2000; Lee 2010; Halilovic & Cicic, 2013). In the literature survey of Petter, Delone & McLean (2013), User Expectations is stated as one of the fifteen success factors that have been found to influence IS success consistently.

IS usage directly depends on the user satisfaction (Bergeron, & Raymond, 1992). End users use the system in a qualified manner, if and only if they are satisfied. The management may force the users, but if they are not eager to use, they do not use the system effectively, then the result would not be satisfactory. User should accept the system for its success. That is why the term “user-acceptance” is so popular. On system usage, users' satisfaction has great impact, meaning that the users do not use the system effectively, if it cannot satisfy its users. When the expectations are not

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