

## **Abstract**

Although often underestimated, helpdesk can be of great value to organization. The helpdesk acts as the front line to provide IT services to users, it is one of the most important criteria when it comes to user satisfaction with overall IT services. However, helpdesks today are faced with growing user demands and high expectations, complex IT systems and resources' constraints, in addition to other factors that are making it difficult for the helpdesk to provide good service quality and maintain user satisfaction.

Helpdesks in the academic environment are no exceptions. Regular performance monitoring can aid helpdesk to ensure that quality of service is maintained, it also highlight areas in need for improvement. This master thesis focuses on developing a methodology for measuring helpdesk performance in the academic environment that considers internal and external measures. This research takes the form of a holistic single-case revelatory study, using Birzeit University Helpdesk as a case to deploy the proposed performance matrix.

From literature, the matrices most important to helpdesk performance are found to be service quality, customer satisfaction, employee satisfaction and various statistical service related matrices, such as average resolution time and first contact resolution. The overall performance of Birzeit University's helpdesk was measured by using various data collection methods. Two questionnaires were administered in this study: the first, is the user satisfaction and service quality questionnaire, based on the SERVPREF instrument, a version of SERVQUAL instrument which is used to measure users' perceived service quality that reflects their satisfaction, the second, is helpdesk staff job satisfaction questionnaire, based on the Abridged Job Descriptive Index 'AJDI', which is used to measure job satisfaction of BZU helpdesk staff; interviews were also administered with helpdesk staff and management to capture more reliable data.

Secondary data from BZU helpdesk call management system is captured and analyzed to compute the statistical service related metrics. The relationship, if exist, between users' satisfaction and their perceived service quality performed by the helpdesk is closely examined for hypothesis testing because of its heaviest weight on the proposed performance matrix.

The results of measuring overall BZU helpdesk performance revealed that the level of users' perceived service quality is very close to that of their overall satisfaction. The findings also indicated that there is a positive relationship between users' perceived service quality and their satisfaction level. It is also found that BZU helpdesk staff job satisfaction also reflects on helpdesk performance and thereof, on users' satisfaction. Moreover, analysis of statistical matrices are related to perceived service quality and users' satisfaction in a positive way; when statistical measures are found to be problematic, we can simply conclude that other performance measures are also problematical.

The Thesis also entails designing a road map solution for the helpdesk system to logically model the function of the helpdesk by the mean of Data Flow Diagrams DFDs. The model proposes a knowledgebase-centric design; and its baseline assumption is that helpdesk support lifecycle starts on level-zero support which is self-learning and self-help stage made possible by the use of a knowledgebase. By the proposed road map solution, the research study attempts to enhance helpdesk service quality not only through periodic evaluation of performance measures, but also by providing the best service delivery practices. The study advises Birzeit University's helpdesk to act more proactively to gradually make a cultural transition in the academic environment.

**Keywords:** service quality, user (customer) satisfaction, employee satisfaction, first contact resolution FCR, average resolution time ART, Data flow diagram, helpdesk, technical support service, knowledgebase, helpdesk electronic system, helpdesk processes, helpdesk functions, factor analysis, SERVQUAL instrument, SERVPREF instrument.