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Understanding the Quality Gap of Information Technology Services from the Perspective of Service Provider and Consumer

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Abstract

Direktorat Pengembangan Teknologi Informasi (DPTSI) is the provider of information technology services in Institut Teknologi Sepuluh Nopember (ITS). Although IT services provided by DPTSI have been managed according to its technical standard, there has been a gap of what service consumers expect and what service consumers perceive. This situation refers to the gap of service quality that may lead to unsatisfied service consumers. This study focuses on understanding the quality gap of IT services from the perspective of service provider – that is DPTSI staffs, and of service consumers – that are lecturers and students. A gap analysis based on Parasuraman works was employed. From the perspective of service provider, a gap between service quality specifications and service delivery (GAP 3) was identified; whereas from the perspective of service consumers, a gap between expected and perceived service (GAP 5) was analyzed by employing SERVQUAL Dimensions. From the analysis, we found that the highest gap lies on the domain and hosting services due to relatively sophisticated technology and unclear flows of the service requests. From internal DPTSI, staffs agreed that control systems are the most common problem in their work. Some recommendations are proposed, e.g. developing a standard operating procedure for domain and hosting services, and allocating staffs according to their capability. At the end, the research contributes to the implementation of gap analysis, and more specifically to improve the quality of IT services in DPTSI.

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Keywords: Information Technology Services; Service Quality; Gap; Service Provider; Service Consumer

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1. Introduction

The focus of providing information technology (IT) today has shifted away from equipping business with technology to delivering services [1]. From the perspective of service consumer, the demand of IT services is driven by rapid technological advances [2, 3], but spending depends on the business resource and capacity [4]. In educational sector alone, the demand of online technology services has risen, e.g. online learning and edutainment, with the proliferation of mobile devices and expansion of infrastructure [5]. Due to the importance of IT services growth in educational sector, the delivery of IT service shall be ensured its quality. Therefore, the value of IT services can be delivered by service provider when the service quality is experienced by service consumers [6].

Managing the quality of Information technology has become business agenda because performance can be substantially improved by ensuring that tactical decisions to develop and support IT emphasize quality [7]. When delivering IT services in educational sector, the service provider manage the quality of the delivery to the service consumers. The common practice to assess quality of IT services in higher education institution is by delivering service quality survey [8, 9]. Others are incorporating service quality framework, i.e. SERVQUAL [10, 11, 12]. In order to understand the quality of IT services, this research focuses on the later assessment by employing the gap analysis between expected and perceived service (GAP 5) introduced by Parasuraman [13, 14]. To add, this research also implements the gap analysis between between service quality specifications and service delivery (GAP 3) [15].

The case study employed in this study is information and communication technology (ICT) services provided by an IT unit in one of public university in Indonesia. The ICT services are delivered by the service provider – that is the Direktorat Pengembangan Teknologi Informasi (DPTSI) in Institut Teknologi Sepuluh Nopember (ITS) [16]; while the services are utilized by the service consumers – which are lecturers and students. There has been a gap of what service consumers expect and what service consumers perceive that may lead to unsatisfied service consumers. The research focused on understanding the quality of information technology services from the perspective of service providers and consumers.

The gap analysis from Parasuraman is employed by studying the GAP 3 and GAP 5 in the case study. Two sets of questionnaires each of which represent the gap studied are developed. Then, the data is analyzed and interpreted in order to provide recommendations of service quality improvements. Prior the recommendations, a root cause analysis is performed. The result from this study provides feedback to the case study upon the service quality of IT services; and moreover to give an insight toward service quality gaps in higher education. The research contributes to the implementation of gap analysis, and more specifically to improve the quality of IT services in educational sector.

The rest of the paper will be organized as follows. Section 2 provides more information on the gaps of service quality from the perspective of service provider and consumer; while Section 3 introduces methods to conduct the gap analysis. Section 4 discusses about the results of the study; and Section 5 underlines findings from the research.

2. Gaps of service quality from the perspective of service providers and consumers

The service quality model was introduced by Parasuraman et al. [17]. In the model, the service gaps are understood from two perspectives, which are provider and customer. The two perspectives can also be described as service provider and service consumer [18, 19]. The model underlines 5 (five) types of gaps as depicted in Fig. 1; they are: (1) *consumer expectation-management perception gap (GAP1)*, (2) *management perception-service quality specification gap (GAP2)*; (3) *service quality specifications-service delivery gap (GAP3)*; (4) *service delivery-external communications gap (GAP4)*; (5) *expected service-perceived service gap (GAP5)*.

3. Research method

This study employs the GAP3 and the GAP5 from the service quality model. The research questions are the service gaps, the underlying problems causing the gaps, and the recommendations from the analysis. To answer these questions, the research is performed in 3 (three) stages as depicted in Fig.2. The stages are: (1) preparation stage; (2) implementation stage; and (3) analysis stage. Each stage is discussed further as followings.

There are 2 (two) processes in the preparation stage. First, 2 (two) sets of questionnaires were developed based on the Parasuraman et al [14, 15]. Second, the sample of the case study was chosen from the population of the provider

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