

Competitive Advantage in the Digital Economy June 2017

Smart Service Design: Efficiency and effectiveness of digital interactions for customer contact.

Dr Steve Pearce, University of Bristol, steve.pearce@bristol.ac.uk

Abstract

Purpose

Digital interaction and self-service now pervade throughout services in the public, voluntary and commercial sectors of the economy. Self-service transactions have a significant economic impact (Castro et al., 2010) in most sectors of the service economy. This research explores service design characteristics with Customer Contact Theory, the Unified Services Theory (Sampson and Froehle, 2006) and Process Chain Network diagrams (PCN) (Sampson, 2012). Service designs using the UST, the service concept (Goldstein et al., 2002) and service encounter (Solomon et al., 1985) are the theoretical basis used for exploring service design. Customer contact theory (Chase, 1978, Chase, 1981) suggests service designs should reduce customer contact to reduce variation to achieve efficiency. Self-service increases customer contact, customer contact theory suggests efficiency reduces. To test this theory for digital interactions, effectiveness and efficiency of process outcomes are analysed for self-service interactions to identify service design characteristics and their impact on process outcomes.

Methodology/Approach,

The research design is based on inductive theory building using a single case. The study uses embedded cases within a single organisation to provide theoretical and analytical replication. Efficiency and effectiveness are analysed for the two embedded cases, one without digital interaction and one with self-service. Service designs for each case are analysed and explored.

Findings

This research developed and tested service design characteristics for customer inputs, measuring the resultant efficiency and effectiveness outcomes. Service design characteristics were identified that ensure efficiency for digital interactions and customer inputs. The role of mediating technology to replace service workers, provide process control, and reduce variation to achieve process efficiency is shown. With these design characteristics and mediating technology this research refutes the original classification in customer contact theory – customer presence in the service system can improve

efficiency and effectiveness. The findings from this research build service design theory. Customer contact theory is reconceptualised on a PCN diagram. This gap in service design theory and practice was acknowledged by (Chase, 2010). Figure 1.0 summarises the findings of this research.

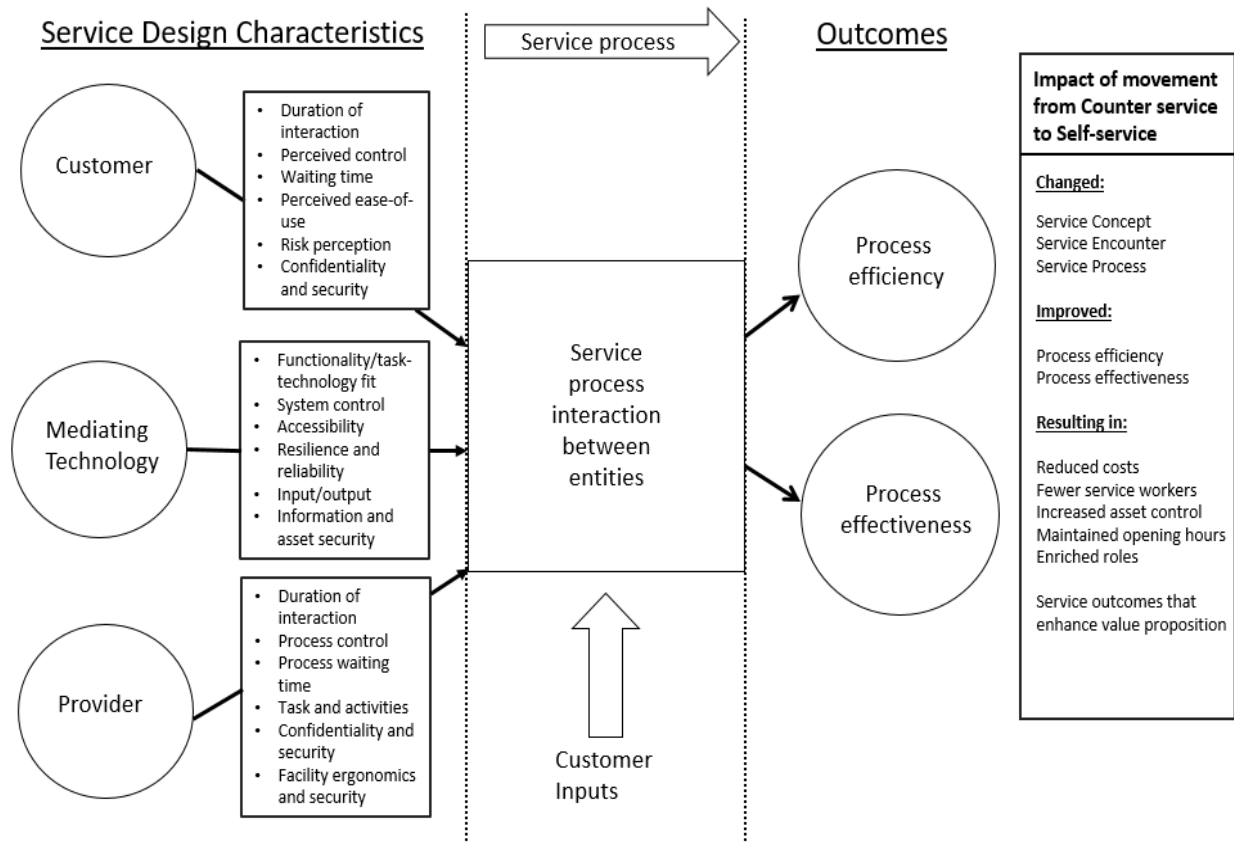


Figure 1.0 Service design characteristics and conceptual model

Originality/Value

Service design research is lagging behind practice in the rapidly changing contexts that exist in the digital economy (Ostrom et al., 2015). These contributions advance service operations management research, provide a theoretical base for further research in other contexts and have significant implications for practitioners for improving productivity. The choice of design characteristics has strategic business implications for competitiveness, service process design and productivity.

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