Are You Being Served? – Exploring the Role of Customers as Employees in the Digital World

Dave Oliver[1], Celia T. Romm Livermore[2], Neveen Awad Farag[2]

[1]Central Queensland University, Rockhampton, QLD, Australia 4702
d.oliver@cqu.edu.au

[2] Wayne State University, 5229 Cass Avenue, Detroit, MI 48202, USA, ce-
lia_romm@hotmail.com, nawad@wayne.edu

Abstract

This paper describes research in progress to identify and classify the dimensions of self-service activity enabled through the Internet. It pursues the notion that this process involves turning customers into employees of the organizations from which the service is being obtained.

1   Introduction

Examples of the service aspect of consumption where customers perform functions that used to be performed by employees are pervasive. For example, it is nowadays commonplace for customers to pick up groceries, place them in a cart, and carry them to the cashier. In some stores customers may even scan purchases and tender payment unaided by an employee. The phenomenon of customers performing tasks that used to be provided by employees of companies extends also into e-commerce, for example Internet Banking.

This area of study is deserving of critical attention for a number of reasons. Zuboff [1988] has made an extensive study of the effects of Information and Communication Technologies (ICT) on tasks performed by employees within organisations. This study seeks to explore issues relating to those "employees" performing tasks who are on the outside. In this sense this study aligns itself with the ambiguities of the modernist view, one that the postmodernist stance seeks to expose [Kraft/Duane 1994].

Sayers [2003] drawing on Fitzsimmons & Fitzsimmons and Harrington, Esseling & van Nimwegen hints at the way consumers are perceived as service providers within the supply chain:

> re-engineering service to take full advantage of self-service is now a full-blown science. 'Process Design' specialists map out service interactions, tim-

ing and measuring each component of a service chain so that ways to gain ef-
ficiencies in the system can be achieved, including ways to get the customer
to do tasks previously done by a staff member.

There is a need to explore the role that websites play in transforming aspects of the
service experience that used to be performed by employees into ones that are now
performed by customers. This study does not seek to extend this "science" but rather
as an initial step, to define, document, categorise, measure and theorise about the
phenomenon within the e-commerce arena. Our objectives in this research program
are to proceed from a definition of this phenomenon to a creation of an instrument that
would measure it. This instrument can then be applied in specific industry and cultural
contexts. This paper addresses the initial objectives of definition and categorisation.

2   Turning Customers into Employees (TCIE)

We define the process of "turning customers into employees" (TCIE) via a company's
website as a process in which "aspects of the customer service experience that used to
be provided by the company's employees are now provided through the interaction of
customers with the company's website" [Romm Livermore et al. 2005].

It should be noted that this is an **interpretive definition** that may or may not fit the
subjective perception of either the company or its customers. Thus, customers may
perceive their interactions with a website (instead of a live employee) as an opportunity
to achieve increased customization of a product (I can design my own T-shirt), faster
speed of service or lower prices [Halbesleben/Buckley 2004], while companies may be-
lieve that offering services via their websites can lead to competitive advantage through
lower costs, increased satisfaction and loyalty of customers and the ability to reach
new consumer segments [Bitner et al. 2002]. The suggestion that the interaction be-
tween the customers and the company is an example of TCIE is, thus, an interpretation
of reality that may or may not be shared by either the companies whose websites we
intend to study or the customers of these companies.

We accept Lengnick-Hall's [1996] definition of the relationship with customers and em-
ployees as "co-production" and we view customers as "partial employees" Mills, Chase
and Margulies [1983], Mills and Morris [1986], Keh and Teo [2001], and Harris, Baron,
and Davies [1999]. Note also that we use the term "employee" to identify those in-
stances that reflect the role of the customer as a the provider of labour in the service
experience. Customers may receive a "benefit" for their labor in the form of lower pri-
ces, greater satisfaction, greater speed of service, and greater customization
[Schneider/Bowen 1995].

We assume that the process of turning customers into employees is not uniform across
companies or industries. In fact, based on preliminary research, we assume that this
process is highly sensitive to variables such as type of industry, level of technological
development, and organizational and national culture. This last assumption forms one
of the issues to be explored in a subsequent study.

3   Placing the research within an information systems context

Most of the research on TCIE has been focussed towards areas other than information
systems. The issue of the customer role in the purchasing process [Lengnick-Hall

1996] and customers interacting with other customers [Grove/Fisk 1997] were of interest to marketing researchers. In human resource management, [Halbesleben/Buckley 2004] focus on how to prepare customers to act as employees and then manage and reward them. To the best of our knowledge, the information systems community has not yet expressed a strong interest in this area. However, within the academic literature on information systems, an article by Pollock [2004] on ERP adoption focusses around the self-service dimension.

4   Development of the TCIE measurement instrument

In accord with Probert's [2002] assertion that "empirical studies can provide important questions and help inform theories in critical IS research" we believe that a necessary initial step to research TCIE within the context of information systems is to develop a measurement instrument. This measurement instrument was developed using a multi-stage process as illustrated in Figure 1 and described in the following sections..

An initial set of criteria to measure the TCIE phenomenon was developed from an exploratory examination of websites made by teams of MBA students (the majority of whom are employed full time and doing their MBA part time). These students were organised into groups of about nine students. The student groups were directed to select three websites from the US, three from either the UK or from Australia, and three from a culture "very different" from either the US, the UK, or Australia (such as Japan or India). This was in order to explore different cultural settings as defined by Hofstede (1980a, 1980b, 1983, 1984, 1994a, 1994b). To determine which cultures are "very different" from the US, Australia and the UK a culture will have to be at least ten points different from the US, UK, or Australia on at least two dimensions of the Hofstede model to qualify as "very different".

Each team was asked to share with the other teams and with the instructor which industry and which country they intended to focus on to make sure that there was no overlap between the teams in terms of the industry/country combinations selected. These students were assigned the task of identifying and reporting aspects of company websites in the retail industry that exhibited instances of self-service activity. These teams were instructed to study each website for "service related tasks that reflect TCIE". The teams were provided with our definition of TCIE as indicated earlier in this paper. They were then instructed to identify between four and ten distinct tasks that reflect TCIE in their sample of websites. Care was taken to ensure that reference sites were not duplicated by the separate teams. Teams were instructed to reach consensus on the tasks they identified. Finally, once identified, the student teams were asked to describe the TCIE tasks in detail and to accompany their description with examples that reflected the various tasks.

Over two successive offerings of this class, the following industry groups were targeted; utilities and finance. A large number of web sites, around one hundred, were reported on by the student groups. These responses were analysed by one of the authors who consolidated these findings into a single list of identifying criteria as shown in the Appendix, using a form of grounded theory analysis [Glaser/Strauss 1967], [Strauss/Corbin 1990; Strauss/Corbin 1997].

4.1   Assessing the Validity of the Instrument

This list of identifying criteria was tested for validity by asking two reference groups to check the items in the list against the definition of TCIE that was presented earlier in this paper. One group comprised six experts. The experts include, two professors of IT with expertise in issues related to E-commerce and web design, two professors of Organizational Behavior and Human Resource Management, and two executives with special expertise in establishing and managing a web based business. Their task was to check each item in the list of criteria against the definition of TCIE and to assess the extent to which the item is an example of an aspect of the service experience that can
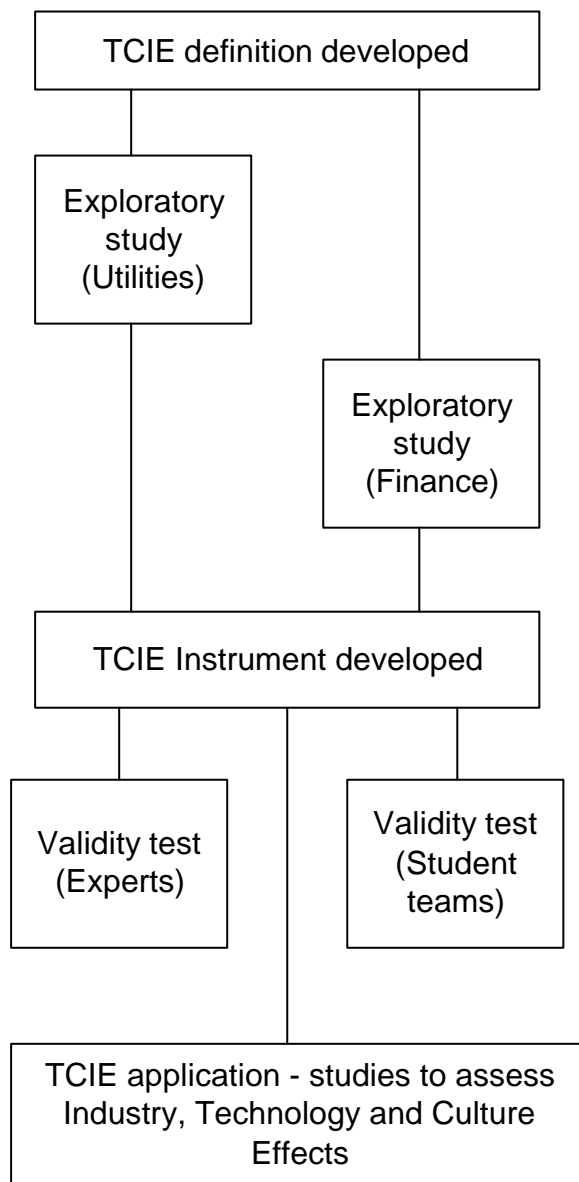

Figure 1. TCIE Instrument Development Framework

be undertaken by a customer instead of an employee. From these responses a Kappa statistic of 0.79 was generated [Landis/Koch 1977]. Landis and Koch suggest the following coefficient benchmarks: poor (<0), slight (0-0.19), fair (0.20-0.39), moderate (0.40-0.59), substantial (0.60-0.79), and near perfect (0.80-1.00). The other reference group was formed from a subsequent class of MBA students who performed the same task. The Kappa statistic from the student group was 0.66. Both groups were therefore in the 'substantial' range.

5 Initial Application of the Instrument

The same class of MBA students who assessed the validity of the instrument as described in the previous section also applied the instrument to a further sample of websites from the retail sector. This study may constitute data that will form part of the studies that are described in the next section. In addition we computed the Kappa statistic on the use of the instrument by the student groups. A calculation was made for each group separately because each team was studying a different set of websites. We ended up with six scores for reliability representing each of the six teams. The Kappa statistics from this process were unusually high, with the lowest being 0.88. This has caused us to reflect that in this initial application of the instrument, the group members were possibly not acting independently as directed.

6 Future developments - Applying the TCIE research instrument

We intend to apply the instrument in a number of different industries, including, utilities, retail, finance, manufacturing and services. The sample will also include a range of countries, including developed and developing countries. These analyses will enable us to answer a number of questions relating to TCIE. These questions include:

What is the effect of industry (or sub industry) on TCIE?

To answer this question we will compare the results of applying the TCIE instrument across industries. We expect the website of companies in different industries to exhibit the process of TCIE in different ways. For example, from the preliminary research, we are aware that companies in the gas, electricity and telephone industries offer clients features that allow them to measure usage (how much gas has been used in the past month) and report it through the website to the company. This is an example of turning the customers into employees in a way that it not evident in the websites of other industries such as retail, where the "measurement of consumption" is either irrelevant or approached differently.

What is the effect of the level of technological development (more advanced in the US versus less advanced in Australia and UK) on TCIE?

To answer this question we will compare the results of applying the TCIE instrument across countries that are similar in culture but represent different levels of technological development. We expect this comparison to enable us to determine the effect of time on the TCIE construct. Thus, from preliminary research, we have determined that in comparing the US to the UK or Australia (all three countries have similar cultures but the US companies tend to be more advanced in their use of their websites for TCIE than the UK or Australian companies), certain aspects that are present in the US websites are not necessarily available in the UK or Australian websites. For example, the

feature of comparing one's gas consumption to "other households like yours" which is available in several US gas websites does not seem as prevalent in websites in the UK and Australia. Given that the cultures of the three countries are supposed to be similar, it is expected that over time and as a result of technological development, these features will be introduced in these countries too.

What is the effect of culture on TCIE?

To answer this question, we will compare the results of applying the TCIE instrument across countries that are expected to be different (based on the Hofstede model). This portion of the analysis will attempt to link the differences between cultures to the cultural dimensions, according to Hofstede, that are supposed to differentiate them. For example, preliminary research demonstrates that cultures that are high on collectivism (such as India) tend to offer opportunities for customers to meet each other face-to-face, so they can teach each other how to use the various features on the website. This option is preferred by cultures high on collectivism to simply offering the option of a telephone or on-line call center.

7 Conclusion

This research in progress outlines an approach that has been taken to researching the TCIE phenomenon as it is manifested in information systems. It outlines the set of tasks identified by the researchers and how they were developed. From this set of tasks an empirically founded model of TCIE may be constructed and examined from a critical perspective. Further developments include the application of the instrument to assess industry, technology and culture effects.

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Appendix - Validity Testing Instrument

❑ **Pre-purchase decision making**		
1. Customers can see a display of products/services with product details	Yes	No
2. Customers receive an on-line invoice	Yes	No
3. Customers can use diagnostic tools to help them define their needs	Yes	No
4. Customers can sample or try products for free before purchasing them (receiving sample reports, trying on a virtual dress, etc)	Yes	No
5. Customers can compare different products by the same company	Yes	No
6. Customers can get information on products of other companies (directly or through banners)	Yes	No
7. Customers can see other customers' comments on products before they make the purchase	Yes	No
8. Customers receive suggestions based on their own past purchases on what products to consider	Yes	No
❑ **Purchase**		
9. Customers can see a display of transaction options	Yes	No
10. Customers can order on-line	Yes	No
11. Customers can pay on-line	Yes	No
12. Customers can pay by phone	Yes	No
13. Customers can pay face-to-face	Yes	No
14. Customers are able to track the merchandise until they get it	Yes	No
15. Customers are able to measure and report usage of a service (for example, gas usage, electricity usage, etc)	Yes	No
16. Customers receive a printable receipt and/or e-mail confirmation of purchase	Yes	No
17. Customers are able to establish an account with the company so as to simplify all future transactions with the company	Yes	No
18. Customers receive coupons for future purchases upon completion of the transaction	Yes	No
19. Customers get rewards for recommending the product to others	Yes	No

20. Customers are invited to receive regular information from the company on new products and services (via a newsletter or direct e-mails)	Yes	No
❑ **Post purchase service and support**		
21. Customers can view their itemized bills	Yes	No
22. Customers can view their payment history	Yes	No
23. Customers can view a comparison of their bill to the bills of other customers	Yes	No
24. Customers can complain or ask questions on-line	Yes	No
25. Customers can complain or ask questions by phone	Yes	No
26. Customers can complain or ask questions face to face	Yes	No
27. Customers have access to on-line community of customers for questions and support	Yes	No
28. Customers have access to face-to-face community of customers for questions and support	Yes	No
29. Customers are provided with on-line advice on how to fix faulty merchandise	Yes	No
30. Customers are provided with a physical address for returning faulty merchandise and receiving a refund.	Yes	No