

UNDERSTANDING HOW PARADOXICAL TECHNOLOGICAL BEHAVIOR AFFECTS MARKETING STUDENTS' EXPERIENCE WITH ONLINE LEARNING TECHNOLOGY

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Abstract

This study is a beginning of the first understanding the paradoxical technological behaviour student in an online marketing courses. This study is based on consumer paradoxes of technology theory. The research reviews the current literature, develops the theoretical model, and the survey questions to measure student technological paradoxes operating within the online marketing course context, such as control/chaos, dependence/independence, competence/incompetence, efficiency/inefficiency, fulfills/creates needs, assimilation/isolation, engaging/disengaging.

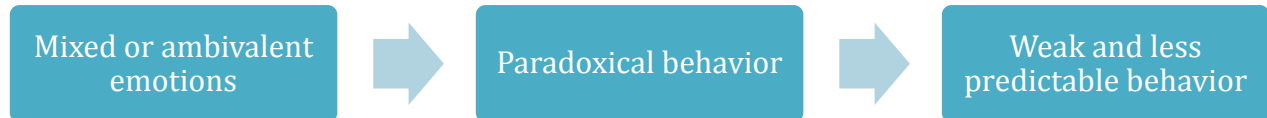
Today's university students are referred as the "digital generation" as they use various technological online learning tools. Technology may be a positive influence in creating a new knowledge revolution. Instead of using technology for only its social and entertainment value, online learning methods give students the skills sets for the future career (Buzzard et al., 2011; Clark III et al., 2001; Hunt et al. 2004); students' engagement with the online facilities has a significant effect on their learning outcomes (Dowell and Small, 2011; Vrasidas and McIsaac, 1999). However, it has been reported that students have studied less because of technology (Oliver, 1996); educators have failed to create an environment for teaching and learning (Ives and Jarvenpaa, 1996); students have preferred more traditional instructional technology for effective engagement (Buzzard et al., 2011). At the same time, to provide the quality of the online learning, marketing educators need to achieve a full potential of adopting the new online technology. The current research is a first examination of the influence of the paradoxical technological behaviour on student experience with online learning technology in marketing courses.

Paradoxes of Technology and Paradoxical Behaviour in Online Learning

Our study organizes the research based on consumer paradoxes of technology. Research on consumer paradoxes of technology may be considered as a subject of a limited stream of research on mixed emotions or ambivalent behaviour.

The dictionary has defined paradoxes as a statement or proposition that seems self-contradictory or absurd, but in reality it expresses a possible truth and/or an existence of simultaneous opposite assumptions or statements, something liked or disliked at the same time (Webster's dictionary, 1998). Many research on consumer paradoxes of technology have indicated that individuals simultaneously experience conflicting positive and negative feelings regarding different components of an object or person, including technology (Johnson, 2008). Mick and Fournier (1998) vividly described the consumer "technology paradox". They have found that consumers may adopt technological products not only to obtain useful benefits but also to enjoy the experience of using them and at other times, consumers reject innovations despite their potential usefulness because of a fear of being overwhelmed by the technology. Kulviwat (2007) identified this behavior as conflicting emotional reactions on consumers' experience when they responded to innovative technology. Our study shows that consumer conflicting emotional reaction during the technological adopting has a direct connection to the online learning process. According to Bransford, Brown, and Cocking (2000), four factors significantly impact the learning process: attention, motivation, emotions, and experiences of the learner. Our study will focus on one of the factors – emotions. As an interesting fact, Paulsen (2005) identified the emotion as an unconscious arousal system that alerts us to potential danger and opportunities at the same time. The improvement of the learning process can be

Figure 1. Consumer Paradoxical Behavior Process



realized through emotions by different learning content: storytelling, provocations, emotional figures, and animations (Modritscher, 2006).

In the consumer behavior science, Johnson and others (2008) found that the conflicts more likely arise when consumers were especially interested in a service that was ideally suited to their expectations. Therefore, a paradoxical behavior results from the conflict between student expectation and realities of an online learning experience. In online learning environment, students are motivated to use online courses because it adds benefits over face-to-face learning methods. As a result of that, student expectations likely make them sensitive to paradoxical dissatisfying with the online learning experience. Because of this conflicting structure, paradoxical attitudes are regarded as weaker, less stable, and less predictable behavior (Johnson et al., 2008); and lead to anxiety and stress (Weigart and Franks, 1989), see figure 1.

Proposed Theoretical Model and Measurement of Student Paradoxical Experience in Online Learning

To understanding how paradoxical technological behaviour affects marketing students experience with online learning technology, the theoretical model was developed based on previous paradoxes of technology studies. To measure student paradoxical experience, we use the methodologies and measurements developed by several research, such as Mick and Fournier (1998), Johnson and others (2008), Kulviwat and others (2007), Japvenpaa and Lang (2005). Table 1 summarize a several paradoxes operate within the current literature.

In our research, we propose the theoretical model of seven technological paradoxes operating within the online marketing course context: control/chaos, dependence/independence, competence/incompetence, efficiency/inefficiency, fulfills/creates needs, assimilation/isolation, engaging/disengaging.

To develop the measurement of the technological paradoxes, we create the questions. The questions were developed based on author experience and previous research of the paradoxes of technology (Mick and Fournier, 1998; Johnson et al. 2008; Kulviwat et al., 2007; Japvenpaa and Lang, 2005).

7 paradoxes of technology and questions:

1. Control/Chaos

- I feel that the online courses create provoking chaos in my learning experience
- I little betrayed by the online courses because the technology changes so fast
- I feel less control with online courses than with face-to-face courses
- the online courses allow me to learn whatever I want to
- the online courses allow total access to my online learning tools
- the online courses facilitate complete monitoring of my learning

2. Dependence/Independence

- I feel that I limit my freedom by using the online courses
- I feel compelled to check my online courses more often than I need it
- I sometimes found myself automatically checking my online courses when I go online

Table 1: Summary of the Literature, the Technological Paradoxes

Mick and Johnson	Jarvenpaa	Kulviwat
<p>Control/Chaos</p> <p>Technology can facilitate regulation or order; and technology can lead to upheaval or disorder</p>	<p>Independence/Dependence</p> <p>Context feedback (reinforcement or change)</p>	<p>Cognition Relative Advantage</p>
<p>Freedom/Enslavement</p> <p>Technology can facilitate independence or fewer restrictions; and technology can lead to dependence or more restrictions</p>	<p>Empowerment/Enslavement</p> <p>Influence of context on users' motivation, goals, and usage patterns</p>	<p>Cognition-Perceived Usefulness</p>
<p>New/Obsolete</p> <p>New technology provides the user with the most recently developed benefits of scientific knowledge; and new technology is already or soon to be outmoded as they reach the marketplace</p>	<p>Planning/Improvisation</p> <p>Context feedback (reinforcement or change) as users experience conflict.</p>	<p>Cognition-Ease of use</p>
<p>Competence/Incompetence</p> <p>Technology can facilitate feelings of intelligence or efficacy; and technology can lead to feelings of ignorance or ineptitude</p>	<p>Competence/Incompetence</p> <p>Influence of context as users are confronted with conflict situations.</p>	<p>Affect-Pleasure</p>
<p>Efficiency/Inefficiency</p> <p>Technology can facilitate less effort or time spent in certain activities; and technology can lead to more effort or time in certain activities</p>	<p>Illusion/Disillusion</p> <p>Context feedback (reinforcement or change) as users adopt particular coping strategies.</p>	<p>Affect-Arousal</p>
<p>Fulfill needs/Create needs</p> <p>Technology can facilitate the fulfillment of needs or desires; and technology can lead to the development or awareness of needs or desires previously unrealized</p>	<p>Fulfill needs/Create needs</p> <p>Usage process for problem solving, task performance, information acquisition, media consumption and entertainment, and social interaction</p>	<p>Affect-Dominance</p>
<p>Assimilation/Isolation</p> <p>Technology can facilitate human togetherness; and technology can lead to human separation</p>	<p>Public/Private</p> <p>Influence of context on reactions of users and ability to manage conflict and to cope with the technology challenge</p>	<p>Attitude and Intention</p>

Engaging/Disengaging Technology can facilitate involvement, flow, and activity; and technology can lead to disconnection, disruption, and passivity	Engaging/Disengaging Adaptation process, behavioral changes, and learning curve.	
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- I often dependent on online courses because they made my learning easy
 - the online courses make me less dependent on instructor help to manage my learning
3. Competence/Incompetence
- the online courses challenge my technical abilities when I try to manage, operate, and maintain the online courses
 - I feel that online courses have some technical features which make me feel dumb
 - I feel strong competence and satisfaction when I use a simple design online courses, rather than a high-technological version of course
 - I often experience inability and resignation to use the online courses
 - If I am competent to use online courses, I will trust the learning process
 - The online courses have improved my ability to learn
 - I am often surprised how things I do not understand about online courses turn out to be simple
 - I sometimes embarrassed after asking instructor or technician for help with the online courses
 - Sometimes the online courses make me feel that my technical skills are limited
4. Efficiency/Inefficiency
- With the online courses, I spend less time to learn
 - I feel that online courses are required more time commitment to maintain them than face-to-face course
 - I feel that I will take more online courses if they are more easy to use
 - I feel that I will take more online courses if they provide more easy to learn
 - Sometimes if I have a technical problem, it takes more time to fix it than I have available
 - Sometimes If I have to speak with a technician to solve the technical problem, it becomes too time consuming
 - When I used online course for the first time, it was a time consuming
5. Fulfill needs/Create needs
- I feel that online courses take a simplicity out of my life
 - I feel that online courses provide a solution to my learning needs
 - I feel that online courses cause a whole range of new problems that I have not had before
 - As soon as I took a new online course and my learning needs are taken care of, I quickly move on to find another online course
 - The online courses fulfill my learning needs to graduate quickly
 - The online courses fulfill my learning needs to receive professional knowledge
 - As an online course user, I need to have a faster technical problem solving process
 - As an online course user, I need to have a quicker response from my instructor
 - As an online course user, I need to have more instructions to complete online assignments or projects
6. Assimilation/Isolation
- I feel more connection with an online instructor than with a face-to-face instructor

- As an online user, I am more likely to be affected by university online service failures or improvements
 - I feel more integrated into university operations with the online courses than with the face-to-face courses
 - I seldom feel the needs to contact to an online instructor or technician
7. Engaging/Disengaging
- When I use the online courses, I feel enjoyment and self-reinforcement
 - I feel that the online courses make me more passive and less active learner than face-to-face courses
 - I often rely on online course tools to remind me about the course activities rather than to do it myself
 - I feel that the online courses help me to engage with my classmates more than the face-to-face courses

Overall satisfaction with online learning question:

Overall, how do you feel about the online courses you have taken so far?

Future Research Directions

This research is a beginning of the first understanding the paradoxical technological behaviour student in an online marketing courses. This study has a few limitations. The first limitation of this study is that the research includes only the literature review, the theoretical model, and the survey questions on the research subject. The author realises that more research is needed to answer on question – what technological paradoxes affect marketing students experience in an online learning. The future research will develop the research methodology, collect and analyse the data, and provide the recommendations to marketing educators. The second limitation of the study is that the present research adopts the consumer behaviour theory – the paradoxes of technology. The methodology to measure the paradoxes of technology uses in this research has never applied to educational technology. It perhaps will be the first time.

References

- Bransford, J. D., Brown, A.L., & Cocking, A. A. (2000). *How People Learn (expanded edition): Brain, Mind, Experience, and School*. Washington DC: National Academy Press.
- Buzzard, C., Crittenden, V. L., Crittenden, W. F., & McCarty, P. (2011). The Use of digital technology in the classroom: A teaching and learning perspective. *Journal of Marketing Education, 33*(2), 131-139.
- Clarke III, I., Flaherty, T. B., & Mottner, S. (2001). Students' perceptions of educational technology tools. *Journal of Marketing Education, 23*, 169-177.
- Dowell, D. J. & Small, F. A. (2011). What is the impact of online resource materials on student self-learning strategies? *Journal of Marketing Education, 33*(2), 140-148.
- Hunt, L., Eagle, L. & Kitchen, P. (2004). Balancing marketing education and information technology: Matching needs or needing a better match? *Journal of Marketing Education, 26*, 75-88.
- Ives, B. G. & Jarvenpaa, S. L. (1996). Will the internet revolutionize business education and research? *Sloan Management Review, 37*(3), 33-42.
- Jarvenpaa, S. L. & Lang, K.A. (2005). Managing the paradoxes of mobile technology. *Information Systems Management, 22*(4), 7-23.
- Johnson, D., Bardhi, F., & Dunn, D. (2008). Understanding how technology paradoxes affect customer satisfaction with self-service technology: The role of performance ambiguity and trust in technology. *Psychology and Marketing, 25*(5), 416-443.

- Kulviwat, S., Brunner II, C. G., Kumar, A., Nasco, S. A., & Clark, T. (2007). Toward a unified theory of consumer acceptance technology. *Psychology and Marketing, 2*(12), 1059-1084.
- Mick, D. G., & Fournier, S. (1998). Paradoxes of technology: Consumer cognizance, emotions, and coping strategies. *Journal of Consumer Research, 25*(2), 123-143.
- Modrilscher, F. (2006). The impact of e-learning strategy on pedagogical aspects. *Instructional Technology and Distance Learning, 3*(3).
- Oliver, R. (1996). Measuring users' performance with interactive information systems. *Journal of Computer Assisted Learning, 12*, 89-102.
- Paulsen, M. (2006). Emotion, memory, and stories. In B. Hoffman (Ed.), *Encyclopedia of Educational Technology*.
- Vrasidas, C. & Mclsaac, M. (1999). Factors influencing interaction in online courses, *American Journal of Distance Learning Education, 13*(3), 22-26.
- Webster's Dictionary (1998). *Random House Webster's Dictionary*, New York: Ballantine Books.
- Weigrat, A. & Franks D. D. (1989). Ambivalence: A touchstone of the modern temper. In *The Sociology and Emotions*, D. Franks & D. McCarthy, eds. London: JAI, 205-277.