A study on the Performance of K 12 Digital School Learning Platform Based on the TTF Theory

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ABSTRACT

Along with the fast-growing usage of the Internet, on-line learning has become a new and popular way of learning. Recently, more and more people in Taiwan are learning via K 12 digital school platform, an on-line learning platform. Issues about K 12's satisfaction and acceptance have been frequently researched, however, the issue about K 12's performance has received only little attention. Based on the TTF(task technology fit) theory, only a technology which is able to support a task can result in good performance impacts. Grounded on the TTF theory, this study was aimed at exploring factors might cause impacts on performance and in the hope that the conclusions can shad some light on management decision making. The data were collected through survey and statistically analyzed. The results from the empirical study showed that self-directed learning and cooperative learning of task characteristic, and information richness and system function of technology characteristics have a positive influence on the task technology fit while the task technology fit also has a positive influence on the utilization. The task technology fit and utilization also have a positive influence on the performance, however, individual characteristics showed no positive influence on the task technology fit. This study has been emphasized on the fitness between task characteristics and technology characteristics and can provide a new direction for on-line learning management and operation.

Keywords : interent learning, TTF, K 12 digital school

Table of Contents

REFERENCES

[1]   (91)

[2]   89   GCCCE 2000
[3]   (92) TAM   TTF   :
[4]   87   409-410
[5]   89
[6]   88
[7]   93   27
http://edtech.ntu.edu.tw/epaper/930810/prof/prof_1.asp [8]   90

[9]   (89)
[10]   89   76   41-46

[11]　　　　　88　　　　　　　：　　4-5

[12]　　　　88

[13]　　（　92）　E-learning　　　　　　　　　　　　　— K 12

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[15]　　（　89)　　　　　　　　　　　　　　：

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[25]　　（　90)　　　—

[26]　　　　　91　　　　　　　　　　　　　—　　　　http://ice.nknu.edu.tw/doc/papers/　/91%20
%20-%20　　　　　　　　—　　　　.pdf

[27]　　　89

[28]　　　91

[29]　　　92

[30]　　（　91)

[31]　　（　91)

[32]　　92

[33]　　88

[34]　　89　　　　　　　　　　　　　　　34　28-32

[35]　　（　91)

[36]　　　　（　92)　　　　　　　　　　　　　2003　　　　　　　　　　　　　　　　[1]
Arbaugh, J. B., " Virtual classroom characteristics and student satisfaction with Internet-based MBA courses ," Journal of Management
Education (24:1), 2000 , pp. 32-54.

[2] Benbasat, I. and Taylor, R. N., " The Impact of Cognitive Styles on Information System Design," MIS Quarterly (2:2), 1978 , pp. 43-54.

[3] Carlyn, M, " An assessment of the Myers-Briggs Type Indicator," Journal of personality Assessment, 41, 1977 , pp. 461-473.

[4] Compeau, D. R. and Higgins, C. A., " Computer Self-Efficacy: Development of a Measure and Initial Test," MIS Quarterly (21:2), 1995, pp.
189-211.

[5] Compeau, D.R. and Higgins, C.A., " Application of Social Ccognitive Ttheory for Computer Sskills." Information Systems Research, 6(2),
1995 , pp. 118-143.

[6] Dishaw, M. T., and Strong, R. M., " Extending the technology acceptance model with task-technology fit constructs. " Information and
Management, 36, 1999 , pp. 9-21 [7] Daft, R.L., and Lengel, R.H., " Organizational information requirements, media richness and structural
design." Management Science. 32(May), 5, 1986 , pp. 554-571.

[8] Emory, C.W. and Copper, D.R., Business Research Method, Homewood, IL:Irwin, 1991.

[9] Feng, T. and Fionn, M., " Towards Knowledge Discovery from WWW Log Data," Proceedings of the The International Conference on
Information Technology: Coding and Computing. 2000 .

[10] Goodhue, D. L., " Is attitudes: toward theoretical and definition clarity." DataBase, 19(3/4), 1988 , pp. 6-15.

[11] Goodhue, D.L., " Development and Measurement Validity of a Task-Technology Fit Instrument for User Evaluation of Information Systems,
" Decision Science, (29:1), 1998 , pp. 138.

[12] Goodhue, D.L., " Understanding User Evaluations of Information Systems," Management Science, (41:12), 1995 , pp. 1827-1845.

[13] Goodhue, Dale L., and Ronald L. Thompson, " Task-Technology Fit and individual performance," MIS Quarterly, 1995 , pp.213-236.

[14] Hopper, S. and M. J. Hannafin, " The effects of group composition on achievement, interaction, and learning cooperative instruction,"
ETR & D (39:3), 1991 , pp.21-38.

[15] Hsu, M.H., Chiu, C. M. and Kuo, F. Y., " An Empirical Examination of the Relationship Between the Internet Self- Efficacy and E-Service
Usage," 2002 , Working Paper.

[16] John D. Wells, Saonee Sarker, Andrew Urbaczewski and Suprateek Sarker, " Studying Customer Evaluations of Electronic Commerce
Applications: A Review and Adaptation of the Task-Technology Fit Perspective," 36th Hawaii International Conference on System Sciences,

2002.

[17] Johnson, D.W. and Johnson, R.T., Cooperation in the classroom. Edina, MN: International Book Company, 1990.

[18] Joshi, K. P., Joshi, A., Yesha, Y. and Krishnapuram, R., " Warehousing and mining Web logs," Proceedings of the second international workshop on Web information and data management, 1999, 63-68.

[19] Jung C. G., Psychological Types, Pantheon Books, New York, 1959.

[20] Keegan, D., The foundations of distance education, Croon Helm, London, 1986.

[21] Keen, P., Bronsema, G. S., " Cognitive Style Research: A Prospective for Integration," Proceedings of The Second Interntional Conference on Information Systems, 1981, pp. 21-51.

[22] Liang, T. P. and Doong, H. S., " Effect of Bargaining in Electronic Commerce," International Journal of Electronic Commerce (4:3), 2000, pp. 23-48.

[23] Liang, T. P., " Critical Success Factors of Decision Support Systems: An Experimental Study," Data Base, 1986, pp. 3-16.

[24] Martin A. Siegel and Sonny Kirkley, Moving Toward the Digital Learning Environment: The Future of Web-Based Instruction, Web-based Instruction, Khan, Badrul Huda, Englewood Cliffs, N.J.:Educational Technology Publication, 1997, p.263.

[25] Mark T. Dishaw,Diane M. Strong, " Experience as a moderating variable in a task-technology fit model, in Association for Information Sy stems," Fourth Americas Conference on Information Systems. Baltimore, MD, 1998, pp.722-724.

[26] Mason, R.O., Mitroff, I. I., " A program for research on management information systems," Management Science, 19(5), 1973, pp. 475-487.

[27] Mathieson, K., and Keil, M., " Beyond the interface: perceived ease of use as a function of task/technology fit. " Information and Management, 34(4), 1998, pp.221-230.

[28] McKenney J. L. and P. Keen, " How Managers Minds work," Harvard Business Review, 52(3), 1974, pp.79-90.

[29] Messick, S., Individuality in Learning. San Francisco: Jossey-Bass, 1976.

[30] Mevarech, Z. R., " Who benefits from cooperative computer assisted instruction?" Journal of Education Computing Research (9:4), 1993, pp.451-464.

[31] Mintzberg H., " Panning on the Left Side and managing on the Right," Harvard Business Review, 54(4), 1976, pp.49-58 [32] Montazemi, A. R., " Factors Affecting Information Satisfaction in the Context of the Small Business Environment, " MIS Quarterly (12:2), 1988.

[33] Myers, I. B., Manual for the Myers-Briggs Type Indicator, Princeton, NJ: Educational Testing Services, 1962.

[34] Myers, I. B. and McCaulley, M. H., Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator. Palo Alto, CA: Consulting Psychologists Press, 1985.

[35] Neter ,J., Wasserman and Kutner , L., Applied Linear Statistical Models, Homewood, IL:Irwin, 1990.

[36] Roscoe, J.T., Fundamental Research Statistics of the Behavioral Science, Holt Rainehart and Winston, Inc, 1969.

[37] Rowe, A. J., and Boulgarides, J. D., Managerial Decision Making. Macmillan Publishing Company, 1992.

[38] Sage, A. P., " Behavioral and organizational considerations in the design of information systems and process for planning and decision support," IEEE Transaction on System, Man, and Cybernetics, 11(9), 1981, PP.640-677.

[39] Stamp, G., " Management Styles," Leadership and Organization Development, Journal (7:3), 1981, pp.23-29.

[40] Van der Veer, G. C., Tauber, M. J. Waern, Y., and Van Muylwijk, B., " On the Interaction between System and User Characteristics," Behaviour and Information Technology (4:4), 1985, pp. 289-308.

[41] Vessey, I. and D.Galleta, " Cognitive fit:an empirical study of information acquisition," Information Systems Research (2:1), 1991, pp.63-86.

[42] Webster J. and Hackley P., " Teaching effectiveness in technoogymediated distance learning." Academy of Management Journal (40:6), 1997, pp.1282-1309.

[43] Zigurs, I. And Buckland, B.K., " A Theory of Task-Technology Fit and Group Support Systems Effectiveness, " MIS Quarterly, September, 1998, pp.313-334.

[44] Zigurs, I., Buckland, B.K., Connolly, J.R. and Wilson, E.V., " A Test of Task Technology Fit Theory for Group Support Systems," The DATA BASE for Advances in Information Systems, (30:3-4), Summer-Fall, 1999, pp.34-50.