

Information and Communication Technology Meshing in Home Economics: An Online Community of Practice

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Abstract — The purpose of this research was to expose the teachers to a project on learning technologies and ways of using technology as a pedagogic practice which could enhance the teaching and learning HE through the use of technology. As has been mentioned earlier, teachers feel ill-prepared to move teaching away from traditional methods and use new pedagogies where appropriate, thereby putting students on center stage in the classroom. The teachers showed that the community of practice and specifically the ICT activities helped them reflect and also progress from knowledge to persuasion stage and then to decision-making. Although the teachers did not interact much, the responses in the interviews and questionnaire showed that they were reflecting and progressing. During this stage the teachers confirmed that they were choosing what was most appropriate for them and what to adopt. All the interviewees confirmed the acceptance of ICT and felt they were in the implementation stage as they were using some ICT in class yet needed more knowledge and ongoing training. Professional development in technology needs to help transform teachers from familiar practices towards ones which require more skills and pedagogic innovation. Teachers need to primarily adopt technology in accordance with their existing practice to ease the process of change whilst new technology is introduced, similarly as the need for compatibility between an old practice and an innovation. I feel there is the need for focused practice on effective technology use in one's own subject in order for teachers to maximize the benefits of ICT.

Keywords — *Information, communication, technology, meshing, home economics, online, community, practice*

I. Introduction

This research was undertaken because of a personal concern regarding the management of change in the take up of ICTI as a pedagogic practice in the local context, with a particular reference to the Home Economics2 classroom. My hypothesis is that teacher training, current classroom practices and continuous professional development have not evolved enough to maximize on the potential of this innovative pedagogy. The growing importance of ICT in education brought about a personal quest to develop my own skills in computer literacy and eventually gain more knowledge and understanding of how ICT can be used effectively in HE teaching and learning since support agencies such as BECTA provide subject specific support, but not in home economics.

An online community can provide the space to build such resources in collaborative ways. I attempted to share a number of practical examples of “Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.” - Arthur W. Chickering 2 teaching and learning HE using ICT, whilst addressing issues of technology integration. The aim is to give HE teachers more knowledge and pedagogic skills in ICT in order to support integration.

In the Philippines, the use of ICT in education has brought about numerous studies from many parts of the world highlighting the benefits and opportunities as well as the challenges for integration. Lack of software for HE is a barrier to effective integration (Santos, 2008). Reyes (2007) found that teachers are using ICT as an information provider, in the preparation of tests and teaching aids, to upload photos on computer, to deliver PowerPoint presentations and to use the Education Informatization System.

Finally, the Department of Education in Davao City believed that computers and the internet have arrived in schools and are widely used in class in most countries. The computer is seen as a means for the preparation of lessons, with 6 many teachers showing confident usage of word processors and fewer showing confidence in developing electronic presentations. The department of education reiterated that the materials used for teaching with ICT include the internet, material available on the school's computer network and other online material such as the CD-ROM. When these figures are compared to teachers' attitudes, questions arise as to how effectively technology was being used in class.

The purpose of this research was to expose the teachers to a project on learning technologies and ways of using technology as a pedagogic practice which could enhance the teaching and learning of HE through the use of technology. As has been mentioned earlier, teachers feel ill-prepared to move teaching away from traditional methods and use new pedagogies where appropriate, thereby putting students on center stage in the classroom.

II. Methodology

The researcher made these qualitative assumptions that consist of the methods used in the process of qualitative research (Creswell 2003). The procedures used by the researcher are inductive and are based on the researcher's own experience in collecting and analyzing data. A phenomenological study describes the meaning of lived experiences of individuals about a concept or phenomenon (Creswell, 2003) was used in this study. The purpose of this study was to gain insights into the experiences of the secondary teachers who embraced online virtual platforms in promoting information and communication technology as an online community practice in teaching home economics classrooms. Phenomenology is considered the best approach applicable

in this study since the researcher will be asking about the lived experiences of the secondary teachers about their ICT integration experiences using online virtual platforms as an online community practice.

All of the participants were between 18 years old and above and are teachers in selected public schools in Davao City. These participants are currently teaching in the school year 2021-2022 with more than two years of experience in teaching home economics. A total of 10 participants are considered in this study who will join the in-depth interview and focused group discussion. Seven of them will join the in-depth interview (IDI) while the remaining three will be subjected to the focus group discussion (FGD). All data gathered during IDI and FGD will be recorded and transmuted to summarize the responses of the participants in an orderly manner. Below are the inclusion criteria of the participants.

III. Results and Discussion

The purpose of this study was to discover the experiences of home economics teachers on the use of information and communication technology in teaching home economics to students during and after the pandemic. This study would likewise mirror how home economics teachers manage excellent performance in teaching online. Further, the analysis of the data revealed three major themes with four sub-themes each; namely, role of internet in HE classrooms, flexibility of a teacher and teacher's multi-tasking tasks commitment.

The teachers showed that the community of practice and specifically the ICT activities helped them reflect and also progress from knowledge to persuasion stage and then to decision-making. Although the teachers did not interact much, the responses in the interviews and questionnaire showed that they were reflecting and progressing. During this stage the teachers confirmed that they were choosing what was most appropriate for them and what to adopt. All the interviewees confirmed the acceptance of ICT and felt they were in the implementation stage as they were using some ICT in class yet needed more knowledge and ongoing training. Professional development in technology needs to help transform teachers from familiar practices towards ones which require more skills and pedagogic innovation. Teachers need to primarily adopt technology in accordance with their existing practice to ease the process of change whilst new technology is introduced, similarly as the need for compatibility between an old practice and an innovation. I feel there is the need for focused practice on effective technology use in one's own subject in order for teachers to maximize the benefits of ICT.

REFERENCES

- [1] Abbott, C., (2001) ICT: Changing Education, UK, Routledge Publishers.

- [2] Alimisis, D., (2007) Education to Promote Constructivist Use of ICT: A Study of a Logobased Project. Available online at http://www.di.unito.it/~barbara/MicRobot/AttiEuroLogo2007/proceedings/P_Alimisis2.pdf (accessed on 31/11/08)
- [3] Annetta, L., Murray, M., Gull Laird, S., Bohr, S., and Park, J., (2008) Investigating Student Attitudes Towards a Synchronous, Online Graduate Course in a Multi-User Virtual Learning Environment, In *Journal of Technology and Teacher Education*, Vol. 16, No.1.
- [4] Ashcroft, K., and Foreman-Peck, (1994) *Managing Teaching and Learning in Further and Higher Education*, London, Falmer Press.
- [5] Austin, R., and Anderson, J., (2008) *E-Schooling: Global Messages from a small island*, London, Routledge.
- [6] Bai, H., and Ertmer, P. • (2008) Teachers Educators I Beliefs and Technology Uses as predictors of Preservice Teachers' Beliefs and Technology Attitudes. In *Journal of Technology and Teacher Education*, Vol. 16 (1) (pp.93 - 112).
- [7] Balanskat, A., Blamire, R., Kefalla, S., (2007) The ICT Impact Report: A Review Of Studies of ICT Impact On Schools, [online] Available at: <http://life.eun.org/ww/enipub/insightmisc/specialreports/impactstudy.htm> (accessed on 28/5/08)
- [8] Barab, S.A., MaKinster, J.G., and Scheckler. R.. (2004) Designing System Dualities: characterising an online professional development community, (pp.53 - 90). In Barab. S.A., Kling, R., and Gray. J.H. • (eds.,) *Designing for virtual communities in the service of learning*, New York, Cambridge University Press.
- [9] Becker, H.J., (2000) Findings from the teaching, learning and computing survey: Is Larry Cuban Right? [online] Available at: <http://www.crito.uci.edu/tic> (accessed on 11/11/2008).
- [10] Becker, H.J., (2001) How are teachers using computers in instruction? Paper presented at the annual meeting of the American Education Research Association, Seattle, April. [online] Available at: <http://www.crito.uci.edu/tlclfindings/special3/> (accessed on 11/11/2008)
- [11] Becker, H.J., and Riel, M.M., (1999) Teacher professionalism, school work culture and the emergence of constructivist-compatible pedagogies. Centre for Research on 193 Information Technology and Organisation. [online] Available at: <http://www.crito.uci.edu/tic> (accessed on 11/11/2008)
- [12] BECTA (2003) What research says about ICT and motivation, [online] Available at: http://partners.becta.org.uk/uploaddir/downloads/page_documents/research/wrts_motivation.pdf (accessed on 16/1/09)
- [13] BECTA 2nd edition, ICT research report (2004), What research says about portable leT devices in teaching and learning, [online] Available at: http://www.partners.becta.org.uk/page_documents/research/wrts_portictts.pdf (accessed on 16/1/09)
- [14] Borg, N., (2003) *Constructivist Elements in Primary Level Software*, In Gatt, S & Vella, Y., (ed.) (2003) *Constructivist Teaching in Primary School*. Malta, Agenda.
- [15] Borg Conti, C., & Sciberras, M., (1996) Teachers' Attitudes towards computer use in primary schools, Unpublished B.Ed (Hons.) dissertation, University of Malta.
- [16] Bradshaw, L.K., (2002), Technology for teaching and learning: Strategies for staff development and follow-up support, In *Journal of Technology and Teacher Education*, Vol 10 (1), (pp. 131-150).
- [17] Bray, B., (1999) Eight Steps To Success: Technology Staff Development That Works, in *Learning and Leading with Technology* Vol 27 No.3 pp 14 - 20, US.

- [18] Bruner, J., (1986) *Actual Minds, possible worlds*. Cambridge, MA: Harvard University Press. Burnett, C., Dickinson, P., Myers, J., and Merchant, G., (2006), *Digital Connections: Transforming literacy in the primary school*, In *Cambridge Journal of Education*, 36: 1, pp.11-29.
- [19] Burnett, C., Merchant, G., and Myers, J., (2007) *English and ICT: Moving Towards . Transformation o/the Curriculum*, In Cremin, T., and Dombey, H., ed., *Handbook of Primary English in Initial Teacher Education*, [online] Available at: <http://www.nate.org.uk/> (accessed on 10/1/09).
- [20] Candace Chou, C., (undated) *Technology Integration with Standards-Based eFolio for K12 In-service Teachers*, [online] Available at: <http://www.pt3 .org/technology/21 century learners.html> (accessed on 10/11/2008). 194
- [21] Carney, J.M., (1998) *Integrating Technology into Constructivist Classrooms: An Examination of One Model for Teacher Development*, in *Journal of Computing In Teacher Education*, Vol 15, pp. 7 - 15.
- [22] Carr, W., & Kemmis, S., (1986), *Becoming Critical - Education, Knowledge and Action Research*, UK, Falmer Press.
- [23] Chan, D., (2006) *The role of ICT in a Constructivist Approach to the Teaching of Thinking Skills*, Singapore, Ngee Ann Polytechnic [online] Available at: <http://www.learnerstogether.net/role-of-ict-in-constructivist-teaching-ofthinkingskills/IS> (accessed on 22/10/08).
- [24] Cogill, J., (2003) *The use of interactive whiteboards in the primary school: Effects on pedagogy*. BECTA Reports (Coventry, Becta). A Paper presented at the BECT A Research Conference 2003.
- [25] Cohen, L., Manion, L., & Morrison, K., (2000) *Research Methods in Education*, London, Routledge Falmer.
- [26] Cole, J., (2005) *Using Moodle: Teaching with the popular open source course management system*, Cambridge, O'Reilly Press.
- [27] Collis, B., and Jung, I., (2003) *Uses of Information and Communication Technologies in teacher education*, In Robinson, B., & Latchen, C., (ed.,) (2003) *Teacher Education through open and distance learning*. London, Routledge.
- [28] Conlon, T., (2004) *A Failure of Delivery: the United Kingdom's New Opportunities Fund Programme of teacher training in information and communications technology*, In *Journal of In-service Education*, Vol 30 (1) (pp. 115 - 138).
- [29] Cordes, C., & Miller, E., (2000) *Fool's Gold: A Critical Look at Computers in Childhood*, US, Alliance for Childhood. Cox, M., Preston, C.,
- [30] Cox, K., (1999) *What Factors support or prevent teachers from using leT in their classrooms?* [online] Available at: <http://www.leeds.ac.uk/educo/ldocuments/00001304.htm> (accessed on 13/12/09).
- [31] Creswell. J.W., (1998) *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*, London, Sage Publications.
- [32] Crockett, M.D., (2002) *Inquiry as professional development: Creating dilemmas through teachers' work*, In *Teaching and Teacher Education*, Vol. 18, (pp. 609 - 624).
- [33] Cuban, L., (2000) *Taking Stock: What does the research say about teclmology's impact on Education?* Interview June 15,2000 [online] Available at: 195 [http://www.techlearning.com/search.aspx?g=larry cuban interview 2000](http://www.techlearning.com/search.aspx?g=larry+cuban+interview+2000) (accessed on 10/11/08).

- [34] Cuban, L., (2001) *Oversold and Underused: Computers in the Classroom*, USA, Harvard University Press.
- [35] Daniel, B., Schwier, R.A., and Ross, H.M., (2005) Intentional and incidental discourse variables in a virtual learning community. In *Proceedings of the World Conference on ELearning in Corporate, Government, Health Care, and Higher Education 2005*, (pp. 1953 - 1965) Norfolk, V A: Association for the Advancement in Computing in Education.
- [36] Daniel, B., Schwier, R.A., and Ross, H.M., (2007) Synthesis of the Process of Learning through Discourse in a Formal Virtual Learning Community. In *Journal of Interactive Learning Research*, Vol 18 (4) (pp.461-477).
- [37] Darmanin, M., (2005) *A Case Study: The Implementation of ICT in Malta*, A Paper presented at a EUNEC Conference May 2005: Implementing Change through Education and Training 2010 [online] Available at: <http://www.vlor.be/webEUNEC/06Seminars%20and%20conferences/2005%20Conference%20Implementing%20change%20Malta.pdf> (accessed on 9/1/09).
- [38] Davis, N., (2003), *Technology in Teacher Education in the USA: what makes for sustainable good practice?* In *Technology, Pedagogy and Education*, Vol 12, No.1.
- [39] Davis, N., Desforges, C., Jessel, J., Somekh, B., Taylor, C., and Vaughan, G., (2004) *Can Quality in Learning be enhanced through the use of IT?* In
- [40] Davis, N., (2004) *Using Information Technology Effectively in Teaching and Learning*, London, Routledge.
- [41] Dawes, L., (2001) *What Stops Teachers Using New Technology?* In Leask, M., *Issues in Teaching Using ICT*, London, Routledge Falmer.
- [42] Demetriadis, S., Barbos, A., Molohides, A., Palaigeorgiou, G., Psillos, D., Vlahavas, I., Tsoukalas, I., & Pombortsis, A., (2003) "Cultures in Negotiation": Teachers' acceptance/resistance attitudes considering the infusion of technology into schools, In *Computers and Education*, Vol 41, Issue 1, August, pp. 19 - 37.
- [43] Denzin, N., & Lincoln, Y., (ed.) (2005) *The Sage Handbook of Qualitative Research*, UK, Sage Publishers. Dexter, S., Doering, A., and Riedel, E., (2006) *Content Area Specific Technology Integration: A Model for Educating Teachers*, In *Journal of Technology and Teacher Education*, 14 (2) pp. 325 - 345.
- [44] Dias, L., (1999) *Integrating Technology, in Learning and Leading with Technology* Vol 27 No.3 pp 10 - 21, US.
- [45] Flick, L.B., (2002) *Technology And A Course For Those Thinking About Teaching: A Response To Henriques*, in *Contemporary Issues In Technology And Teacher Education* [Online serial], 2(2), pp. 127-135.
- [46] Fosnot, C.T., (1989) *Enquiring Teachers, Enquiring Learners*, New York, Teachers College Press. Fosnot, C.T., (2005) *Constructivism: Theory, Perspectives and Practice*, New York, Teachers College Press.
- [47] Fosnot, C.T. & Perry, R.S., (2005) *Constructivism: A Psychological Theory of Learning*, (pp. 8 - 38).
- [48] Fosnot, C.T., (2005) *Constructivism: Theory, Perspectives and Practice*, New York, Teachers College Press.
- [49] Garrison, D.R., and Anderson, T., (2003) *E-Learning in the 21st century: A Framework for Research and Practice*, London, Routledge Falmer.
- [50] Gatt, S., (2003) *Constructivism: An Effective Theory of Learning*, In Gatt, S & Vella, Y., (ed.) (2003) *Constructivist Teaching in Primary School*. Malta, Agenda.

- [51] Gatt, S & Vella, Y., (ed.) (2003) *Constructivist Teaching in Primary School*. Malta, Agenda.
- [52] Genishi, C., Mc Carrier, A., & Nussbaum, R.N., (1988) *Research Currents: Dialogue As A Context For Teaching and Learning*. In *Language Arts*, 65, pp. 182 - 190.
- [53] Gibson, J.I., (1997) *The Ecological Approach to Visual Perception*, Boston, Houghton Mifflin.
- [54] Glaser, B.G., (1992) *Emergence vs. Forcing: Basics of grounded theory analysis*. Mill Valley, CA, Sociology Press.
- [55] Glaser, B.G., & Strauss, A.L., (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*, USA, Aldine Transaction.
- [56] Glazer, E.M., & Hannafin, M.I., (2006) *The Collaborative Apprenticeship Model: Situated Professional Development within School Settings*, In *Teaching and Teacher Education*, 22, pp. 179 - 193.
- [57] Green, M., and Cifuentes, L., (2008) *An Exploration of Online Environments Supporting Follow-Up to Face-to-Face Professional Development*, In *Journal of Technology and Teacher Education*, Vol. 16, No.3, pp. 283 - 306. 198
- [58] Hammond, M., (2005) *A Review of Recent Papers on Online Discussion in Teaching and Learning in Higher Education*, In *Journal of Asynchronous Learning Networks*, Vol 9, Issue 3 - October, USA, Sloan Consortium.
- [59] Hammond, M & Wiriapinit, M., (2005) *Learning through Online Discussion: A Case of Triangulation in Research*, in *Australian Journal of Educational Technology*, 21 (3), pp. 283 - 302.
- [60] Hawkins, R.J., (2001), *10 lessons/or ICTand Education in the Developed World*, In *The Global Information Technology Report 2001*. [online] Available at: http://unpan1.un.org/intradoc/groups/public/documents/APCITY/IUNP_AN008676.pdf (accessed on 26/1/09).
- [61] HE state school syllabus, (2008) [online] Available at: http://www.curriculum.gov.mt/docs/syllabus_home_economics_07_08.pdf(accessed on 12/12/08).
- [62] Henriques, L., (2002) *Preparing Tomorrow's Science Teachers to Use Technology: an Example from the Field*, In *Contemporary-Issues in Technology and Teacher Education [Online serial]* 2(1), pp. 3 - 18.
- [63] Herrington, J., & Oliver, R., (2000) *An Instructional Design Framework For Authentic Learning Environments*, in *Educational Technology Research and Development*, 48(3), pp.23 -48.
- [64] Herrington, A., Herrington, J., Kervin, L., and Ferry, R., (2006) *The Design of an online community of practice for beginning teachers*. In *Contemporary Issues in Technology and Teacher Education*, 6 (1), pp. 120 - 432.
- [65] Hill, C., (2008) *Teaching with e-Learning in the Lifelong Learning Sector*, UK, Learning Matters.
- [66] Hoadley, C.M., & Kilner, P.G., (2005) *Using Technology To Transform Communities of Practice into Knowledge-Building Communities*. *SIGGROUP Bulletin*, 25, 1, 31 - 40.
- [67] Hobsbaum, A., Peters, S., & Sylva, K., (1996) *Scaffolding in Reading Recovery*, In *Oxford Review of Education*, 22, 1 pp. 17 - 35.
- [68] Hruskocyc, C., Cennamo, K., Ertmer, P.A., & Johnson, T., (2000) *Creating a Community of Technology Users: Students Become Technology Experts For Teachers And Peers*, In *Journal of Technology and Teacher Education*, Vol. 8 pp. 69 - 84.

- [69] Hughes, J. (2004). Technology learning principles/or preservice and in-service teacher education. In *Contemporary Issues in Technology and Teacher Education* [Online serial], 4(3). Available at: <http://www.citejournal.org/voI4/iss3/generallarticle2.cfm> (accessed on 8/4/08) 199
- [70] Hunter, B., (2001) *Against the Odds: Professional Development and Innovation Under Less-Than-Ideal Conditions*, In *Journal of Technology and Teacher Education* (9) 4, pp. 473 - 496.
- [71] Impact2 BECTA report (2002), [online], Available at: <http://www.becta.org.uk/impact2/> (accessed on 16/01/09). ISTE (1999) *National Educational Technology Standards for Students - Connecting Curriculum and Technology* [Online] Available at: <http://www.iste.org/standards/index/html> (accessed on 12/12/06).
- [72] ISTE (2000) *National Educational Standards For Teachers* [online] Available at: <http://www.iste.org/standards/> (accessed on 12/12/06)
- [73] Jonassen, D.H., & Colaric, S., (2001) *Information Landfills contain knowledge; searching equals learning, hyperlinking is good instruction and other myths about learning from the Internet*. In *Computers in Schools*, Vol 17(3/4), Part 1, pp. 159-170.
- [74] Jonassen, D.H., Peck, K.L., & Wilson, B.G., (1999) *Learning with Technology: A Constructivist Perspective*. New Jersey: Prentice-Hall.
- [75] Jonassen, D.H., Howland, J., Moore, J., & Marra, R.M., (2003) *Learning to Solve Problems with Technology: A Constructivist Perspective*, New Jersey, Pearson Education Inc.