

Acculturation in Context: Knowledge Sharing Through Ubiquitous Technologies

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Abstract: In this paper, we present plans for a retooled ubiquitous computer system that works towards facilitating knowledge acquisition and knowledge dissemination between learners during the process of acculturation. Focused on the foreign population of JAIST (Japan Advanced Institute of Science and Technology - a Japanese post graduate university in Japan), the system provides a platform on which to study the behaviour of participants, and also the process of acculturation dynamically in context. In addition, the study works towards understanding the feasibility of using such ubiquitous systems as possible support mechanisms in the future. In the current global environment, human beings via their own experiences acculturate at different speeds, and with different levels of success. By incorporating ubiquitous technology into the environment in which people are acculturating, we provide a new way to analyse the process of acculturation dynamically, and provide assertions as to how the system may benefit users in the future.

Keywords: ubiquitous learning, mobile technology, acculturation, aware computing, knowledge embedded environment

1. Introduction

In Japan the ambitious goal of reaching 300,000 international students by the year 2020 has been regarded of importance (MEXT 2008). Japanese institutions are increasingly marketing their curriculum to prospective foreign students, but having these students effectively acculturate or adjust to the environment is seen as difficult (Sun 2012, Murphy-Shigematsu 1998).

Acculturation explains the process of cultural and psychological change that results in the meeting between cultures, and variations in ways of acculturating have become commonly known by the terms *integration*, *assimilation*, *separation*, and *marginalisation* (Sam 2010). Those who *integrate* (defined as being engaged in both their heritage culture and in the culture of the larger society) are seen to be better adapted than those who acculturate by orienting themselves to one or the other culture (by way of assimilation or separation), or to neither culture (marginalisation) (Sam 2010).

Research demonstrates that there are considerable difficulties and stresses associated with the process of acculturation (Padilla 1985, Ben-Sira 1997, Douglas 2000, Tilburg 2005, Mirdal 2006, Gertzog 2011, Valencia-Garcia 2012). These difficulties often present themselves in the form of language acquisition, cultural communication, and feelings of isolation. Issues surrounding the process of acculturation have been said to lead to low productivity (Kompler 1999), and even higher mortality rates amongst the foreign population within its host country (Stevens 2002). In addition, many of these difficulties are considered as contextual, thus the knowledge acquired also remains contextual. Contextual relevance in knowledge sharing is a topic that has been extensively discussed (Hwang 2008, Gertler 2003).

Looking at the way in which learners acculturate to new environments, certain questions arise in relation to the way in which ubiquitous technology may be useful in this process. For example: 1) Could ubiquitous technology provide an adequate platform on which the experiential knowledge associated with the acculturation process may be stored for further reflection? 2) Can ubiquitous technology play a role in learners effectively sharing and disseminating their knowledge, yet still have that knowledge remain contextual and relevant? 3) How can this technology provide new ways with

which to analyse the data associated with the process of acculturation? 4) Is it possible to monitor the behaviour of learners within this system?

Ubiquitous computing is seen as a technology that has continually gained in momentum since its conception (Abowd 2000). Referred to as technology that seamlessly enables large numbers of objects within a computer network (Rodríguez & Favela 2003), ubiquitous computing systems allow for integration of various wired and wireless sensing technologies, along with embedded software, mobile, and desktop computing systems. When looking at research surrounding the use of mobile devices and ubiquitous technology in educational frameworks, it has been demonstrated that many benefits occur from the perspective of knowledge sharing and reflection (Ogata 2004/2010, Sharples 2000, Wentzel 2005, Sousa 2006). Studies also highlight the importance of understanding how communication technologies play certain roles in the acculturation process (Parette 2004, Lim 2011, Chib 2011). Based on these findings, we form assertions that the contextual knowledge acquired during the acculturation process, may be more easily stored, disseminated, shared, and reflected upon between participants acculturating to an environment via the latest advances in mobile devices, and ubiquitous technologies.

This study looks towards utilising mobile devices and ubiquitous technology to not only better understand the process of acculturation, but also facilitate the construction of a *knowledge embedded environment* to provide support for users adapting to a new cultural or organisational context.

2. The Ubiquitous Learning Log – The System Foundation

As mentioned previously, our plan is to retool an existing ubiquitous computer system that is currently focused in educational frameworks. The base system we are using is the “ULL” (Ubiquitous Learning Log) developed by Ogata et al. (2010). This system facilitates the recording of experiences that occur “anytime in anyplace”, thus allowing users to then share, reflect upon, and reuse these experiences at a later date.

Before explaining exactly how we propose to use the ULL system for our study, it is best to provide the reader with a technical outline of the system in its current form. Doing so will provide an understanding of the features that we believe to be relevant to the process of acculturation.

Within the following three sub-sections of this paper, we will put forward the key functional elements of the existing ULL system that will remain intact for our study on acculturation.

2.1 The ULL recorder

The ULL Recorder facilitates uploading or storing of learner experiences into the system wherever or whenever they may find themselves. Using either a browser-based client, or an android application (as displayed in figure 1. below), learners have the ability to take photographs or video and apply them to certain logs, ask questions in relation to the log, comment or add extra information, apply GPS (Global Positioning System) location information, allocate a QR-code for easy retrieval, and also authorise if the log will be shared with other users of the system.

In addition to the functions stated above, a key aspect of the system is that language translation supporting numerous languages is also built in if required, thus facilitating effective communication between learners from different cultural backgrounds. In terms of the server side of the system, these logs are stored in a server running on Linux OS, programmed using Java and PostgreSQL.

2.2 The ULL Reminder

A list of all previous learning logs are stored and displayed by the system, which allows a learner to easily recall all of his/her past experiences. Figure 1. below highlights the 'My Log' section displaying the logs that an individual has uploaded into the system.

In addition to the learner being able to reflect on his/her past logs, the learner can also look through the logs uploaded and made available from other learners within the system. This facilitates

the acquisition of knowledge a learner may not have had direct experience with, or supplies a source of knowledge from another user as a comparison relative to the learner's experience within the same geographical location. In addition to the above, the system also facilitates a quiz based on logs already in the system, allowing users to reflect on knowledge previously obtained in certain geographical locations.

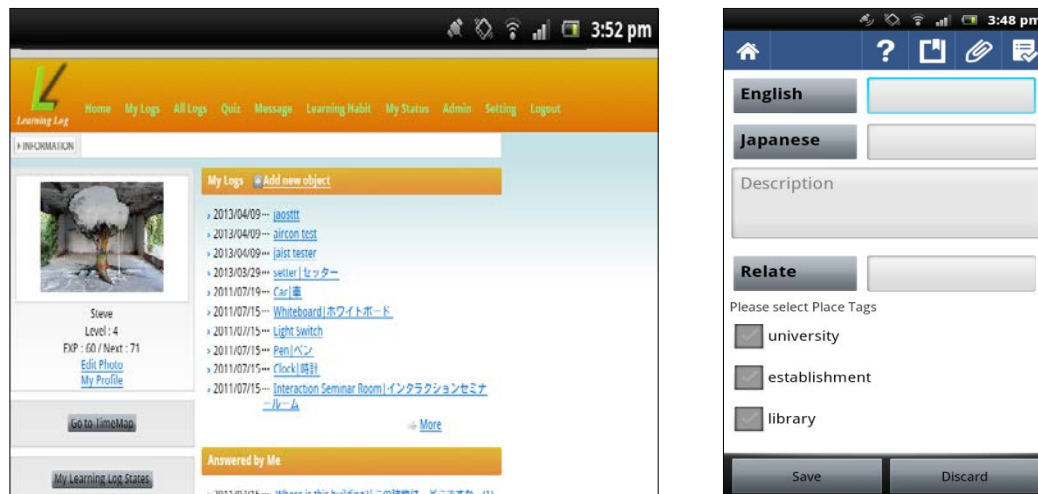


Figure 1. – ULL Recorder and Log Review Screens

2.3 The ULL Navigator

The ULL Navigator provides the user with an AR (Augmented Reality) interface with which to navigate through the ULLs in a real-time contextual manner. When a learner enters a certain geographical location with his/her mobile device, logs that have GPS information attached will send an alert through the system to the learner. Once alerted, an AR view will appear clearly highlighting logs that have been recorded in the current area. If a user should decide to click on a certain log, a Google map will be retrieved marking the ULL Object location, and in addition marking the users themselves in relation to said log. This function allows for context specific information to be easily shared amongst users of the system, seamlessly integrating and combining knowledge.



Figure 2. – Smartphone Augmented Reality Display and Googlemap Display

3. Projected Benefit of Ubiquitous Learning Log for Facilitating Acculturation

Now that the reader has an understanding of how the core elements of the system applicable to our study function, we will look at the possible benefits of the system in relation to the process of acculturation. The test-bed for our study is JAIST (the Japan Advanced Institute of Science and Technology), which is a post-graduate institution that prides itself on having 29% of students and

18% of faculty from abroad, thus providing us with the participants to test and validate the system in the area of acculturation.

The following sub-sections will outline benefits of the ULL system that pertain to the process of acculturation.

3.1. Knowledge Embedded Environment - Contextual Relevance and Accessibility

Contextual knowledge acquisition and sharing is seen as important (Hwang 2008, Gertler 2003), thus for an individual to effectively acculturate to a new environment, one could assert that an individual's experiences within a particular context are more effectively shared when referred to in that same context. By traditional methods this is of course very difficult to facilitate. The ULL system uniquely allows knowledge to be shared and disseminated amongst all users of the system, but remain attached to the context or environment in which it resides, or in which it was originally created. This is what we call the *knowledge embedded environment*.

For example, as a user experiences something in the environment that may lead to questions or issues regarding cultural difference, a user can simply upload an externalised form of this experience, or a query/question surrounding the experience into the system using the ULL Recorder. Along with the uploaded experience/query, GPS location information, printable QR codes, and corresponding augmented reality can all be placed in the environment, and then subsequently used to retrieve or trigger logs. When the original log author, or another user of the system enters into the environment that has GPS/QR information attached with his/her mobile device, their mobile devices will be triggered into displaying the particular issue/comment/question logged by the author, thus allowing for contextual relevance, or knowledge being embedded into the particular context itself.

Allowing issues or knowledge associated with acculturation to not only be externalised and shared with others within the system, yet remain fixed to the context itself via GPS or QR-coding, may prove extremely beneficial in learners ascertaining the relevance of this externalised knowledge. In addition, facilitation of communication within the environment itself without language barriers should provide a level of *integration* - again seen as the most positive form of acculturation amongst researchers in the field - difficult to attain from other means.

Below in figure 3, we demonstrate how an individual's experience is input into the ULL system, then subsequently shared, reflected upon, and internalised. This process remains fixed to the context or environment, thus the embedded knowledge is there ready for the next user who may enter the same location, or for the original author as a way to reflect upon previous thoughts and experiences in context.

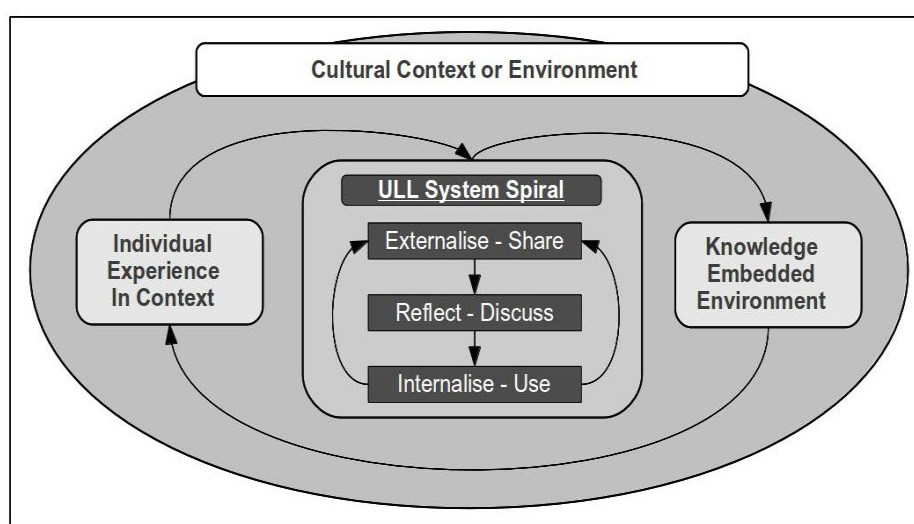


Figure 3. – From Individual Experience to Knowledge Embedded Environment Model.

3.2 Dynamic User Generation with Community Focus

The process of acculturation is one that is extremely dynamic in nature. As a learner has an experience within the context or environment, these experiences form the knowledge that relates to certain behavioural and cultural changes in the individual. The speed at which changes occur in the environment, or the speed at which changes occur in the individual, highlight difficulties in traditional ways of keeping track of these changes amongst individuals during the acculturation process.

In addition, these experiences are extremely personal in nature, thus proving difficult to express to others that may not have had similar experiences within the same context. An analogy of this may be related to the tacit knowledge associated with what a roller-coaster feels like – without a person experiencing the context or environment itself, it may be difficult to externalise the opinions or feelings, or even answer questions in any meaningful manner that an individual may have relating to the specific experience.

As logs uploaded into the ULL system can be shared instantly with others, and also be attached to the context itself via the use of GPS or QR-codes, we believe that this may provide a powerful mechanism with which to relate to the experiences of others within the learning community – not only others from the same cultural background, but any users of the system in the same environment or context. As *integration* is seen as the most efficient way of acculturating, access to the dynamically created logs within the environment may facilitate an attachment to others within the learning community. We see this as very different from regular SNS (Social Networking Services), or other networked communication methods which are also quite dynamic in nature. This is due to the way in which users have contextually relevant knowledge shared via the system, that is not only contextual in nature, but also shared instantly in a dynamic fashion.

3.3 The Ubiquitous Learning Log as an Acculturation Monitoring Tool

Another benefit of using the ULL system, comes from the way in which knowledge and behavioural changes can be logged and monitored within the system. We assert that this may be beneficial for administrations and management in charge of facilitating the process of acculturation in newcomers to a particular context. Acculturation difficulties, as asserted by many in the field (Tilburg 2005, Padilla 1985, Mirdal 2006, Valencia-Garcia 2012, Kompler 1999, Stevens 2002) are seen as issues that affect productivity and stability within the host society.

Understanding the issues that newcomers are experiencing by conventional methods is not only time-consuming, but is difficult to keep track of in terms of environmental change. By using the ULL system, those responsible for managerial decision making will have access to issues that users are experiencing in near real-time. For example, if a user of the system is having acculturation trouble in a particular location, the system will highlight the particular location or context along with the issue itself. As the original author of the log enters the same location, or another user of the system enters the environment, their mobile devices will be triggered into displaying the particular log which may or may not also contain a question, answers, or comments from other users. From an administrative standpoint this could prove extremely valuable, as not only understanding what learners in a particular environment or context are feeling or experiencing, but also seeing how questions are answered by other users from a dynamic bottom-up level, will allow for quick decision making or administrative changes that previously would have taken time-consuming surveys, interviews, and/or anthropological studies to achieve.

Of course it must be stated that the main focus of our study is not purely focused on developing a managerial tool to be implemented in the university at this time. We are focused on the knowledge transferred between users of the system itself, and in addition the behavioural changes associated. However, in future studies there may be foreseeable benefits in using such a system from the administration perspective.

4. The System in Practice

To assist the reader in understanding how the system functions in practice, we will put forward an extremely simple step-by-step scenario highlighting how a user/learner will externalise his/her own experiences, how that same user/learner will attach or embed this knowledge in the environment, and how users of the system will retrieve, reflect upon, and use this knowledge.

4.1 Experience in the Environmental Context

First of all, User-1 enters a new environment that he/she is not familiar with. In this case we put forward the simple example of a shopping environment. In Japan it is customary for the shop assistants to call out the phrase 'Irashaimase' in unison, which means 'welcome to our store'. User-1 is not familiar with this phrase, nor the custom of a greeting in unison, and is unsure how to respond, or even if responding is necessary.



Figure 4. (left) – User-1 has new experience in environment. (right) – User-1 externalises the experience.

4.2 Externalisation and Sharing of the Experience

Once User-1 has this experience, he takes a quick photograph or recording and uploads it into the ULL system along with an explanation of what had transpired. The system gives User-1 the option to attach location data to the log, and also provides an area for a question to be added. Once completed, the system now has User-1's experience recorded. This externalised experience remains in the ULL system and attached to the environment itself through GPS or QR-code information.

4.3 User Reflection and Discussion

Now that the experience of User-1 has been externalised via the ULL system, this experience is now able to be viewed by other users of the system. When User-2 enters the same geographical location, or scans a QR-code in the context itself, his mobile device is triggered into displaying the experience externalised by User-1. From this point User 2 has the ability to comment on the experience, answer any questions that may have been asked, and re-share the experience with others.

4.4 Internalise and Use the New Knowledge

Now User-1 can reflect on the experience with the added benefit of understanding the experience of User-2 within the same environmental context, thus providing not only a connection with another foreigner in the environment, but also a way to reflect on his own experience.

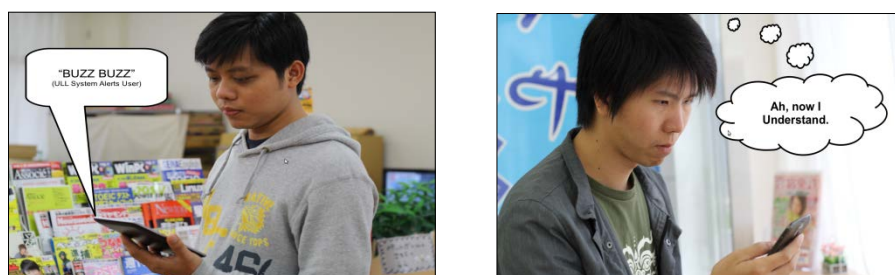


Figure 5. (left) - User-2 receives alert via the system to acculturation difficulty and uploads response. (right) - User-1 reflects upon his initial experience in comparison with User-2.

4.5 Deeper Knowledge Transfer/Acquisition and Behavioural Trait Assessment

The simple scenario presented above of course highlights how the system works in practice, and how the system may benefit in areas of basic language understanding and simple behavioural changes. However, we assert that the system may also be able to assist in deeper levels of knowledge transfer and acquisition within much more complex scenarios. Tacit knowledge, for example, is currently difficult to share with others - especially with others who may be outside the individual's own circle of friends, or outside of the given context. We believe that this system not only provides a way to share tacit knowledge that would have previously been unshared, but in addition, have that knowledge remain embedded in the environment itself, thus providing contextual relevance.

In addition, as users continue to add to existing log entries by making comments or by giving advice, the system itself provides users a way to gauge the behavioural change, knowledge level, and progress within other users, and of course within themselves too. Correlations between logs uploaded into the system may not only shed light in regards to the way in which participants are changing their behaviour over time, but in addition provide insight into the reasoning process utilised by the participants in certain situations.

So how will the system be able to highlight change (behavioural or otherwise)? Let us say that a user has externalised certain experiential and contextual problems into the system, and has had comments from others in relation to this problem or issue. This user should, in theory, be able to comment effectively on the uploaded externalisations of others in similar situations. When this occurs, it may demonstrate changes in the learner's behaviour, and highlight the knowledge generation process when referring back into previous entries from the same user.

5. Proposed Method of Research and Evaluation

The first step in this study will be to ascertain the acculturation level of existing students within JAIST. To accomplish this, an initial survey (pictured below in figure 4.) has been constructed that combines several existing instruments used within research projects in this field (Barry 2001, Benet-Martinez 2006, Gim Chung 2004, Lim 2002). Following this initial survey, a proportionate sample of the international student body will be taken, and direct interviews will be given. These interviews will try to ascertain if respondents are having similar issues within the institution itself, so as to gain further insight into the areas in which the system should be focused.

Based on the findings obtained from the initial survey and interview, formulation of an implementation strategy for the mobile and ubiquitous system will be constructed. Although content for the mobile and ubiquitous system will be dynamic in nature - driven by a user-generated bottom-up method - some initial guidance will be applied, thus focusing on certain issues highlighted from the interviews. Participants will also be chosen based on the proportionate student body sample that responded to the initial survey. By this we mean that if a certain percentage of students happen to come from a single country, the study using the technology will reflect the same percentages. These students will then be encouraged to use both the supplied mobile based android application, and the browser-based software to assist them in the process of acculturating to the JAIST environment.

The final stage of evaluation consists of a secondary survey and interview that will be conducted with the students who responded to the first survey. Two groups will be separated from the respondents:

- group 1 - those who experienced acculturation without the use of the ULL system
- group 2 – those who experienced the process of acculturation with the assistance of using the mobile and ubiquitous ULL system.

The data gathered from this survey will be cross-referenced with the data from the initial survey given, and the results of the cross-examination will lead us towards the feasibility of this technology for the purpose of acculturating to a new environment.

Survey for Acculturation
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Background Information

Name: _____ Email Address: _____

Male. _____ Female. _____

Age:
 15-20. _____ 21-25. _____ 26-30. _____ 31-35. _____ 36-40. _____ 41-45. _____

Where do you come from? _____

How long have you been in Japan?

1 Month. _____ 6 Months. _____ 1 Year. _____ 2 Years. _____
 3 Years. _____ 4 Years. _____ 5+ Years. _____

How long have you been in JAIST?

1 Month. _____ 6 Months. _____ 1 Year. _____ 2 Years. _____
 3 Years. _____ 4 Years. _____ 5+ Years. _____

Please circle what kind of JAIST student you are:

M1. M2. M3.
 D1. D2. D3. D4.

Language Ability and Use

What is your native language? _____

Rate your overall English language ability (1 being the lowest and 7 being the highest). _____

Rate your overall Japanese language ability (1 being the lowest and 7 being the highest). _____

Rate your overall native language ability (1 being the lowest and 7 being the highest). _____

Feelings and Culture

1. I feel more comfortable communicating with shop staff in Japan than in my own country.
2. I only listen to music from my own culture.
3. I tell jokes both in Japanese, and in my native language.
4. Generally, I find it difficult to socialise with both Japanese and foreigners.
5. I get along with Japanese people better than people from my own country.
6. My closest friends here in Japan are not Japanese.
7. I feel very comfortable around both Japanese and other nationalities here in Japan.
8. Sometimes I find it hard to trust both Japanese and other nationalities.
9. I find it easier to communicate my feelings to Japanese than to other foreigners.
10. Foreigners in Japan should not date Japanese Men or Women.
11. I have both Japanese and foreign friends in JAIST.
12. I do not feel comfortable when I am with other people.

Figure 7. – Acculturation Survey

6. Conclusion

In this paper we have outlined a proposed method using mobile devices and ubiquitous technology that is aimed at not only facilitating, but also monitoring and exploring the process of acculturation.

By discussing how the system provides a *knowledge embedded environment* that can monitor behavioural changes participants, and facilitate the sharing and reflection of knowledge in various forms, we have presented a system that has projected benefits associated with acculturation in context. We assert that by retooling an existing and proven ubiquitous computer system for this purpose, we not only provide an easy to use system that guides learners to reflect on the acculturation experiences of themselves and others in a completely new way, but in addition provides a way to attach knowledge directly to the environment itself.

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References

- Abowd G. D. and Mynatt E. D. (2000) Charting past, present, and future research in ubiquitous computing. *Journal ACM Transactions on Computer-Human Interaction (TOCHI) Special issue on human-computer interaction in the new millennium, Part 1. Volume 7 Issue 1*, pp.29-58
- Barry, D. T. (2001). Development of a New Scale for Measuring Acculturation: The East Asian Acculturation Measure (EAAM). *Journal of Immigrant Health* 3(4), pp.193-197.
- Ben-Sira Z. (1997) Immigration, Stress, and Readjustment. *Praeger Publishers, 88 Post Road West, Westport, CT 06881. An imprint of Greenwood Publishing Group, Inc.*
- Benet-Martinez.(2006). Benet-Martinez Acculturation Scale. from <http://www.ocf.berkeley.edu/~psych/bmas.html>
- Chib, A. I., and Aricat, R. G. (2011) "The flux of emergent ties in the city-state: Understanding the role of mobile phones in the acculturation of Christian Indian migrant workers in Singapore." *IAMCR 2011-Istanbul*.
- Douglas, M. and Roberts, G. (2000) Japan and Global Migration: Foreign Workers and the Advent of a Multicultural Society. *Hawaii: University of Hawaii Press*.
- Gim Chung, R. H., et al. (2004). Asian American Multidimensional Acculturation Scale: Development, Factor Analysis, Reliability, and Validity. *Cultural Diversity & Ethnic Minority Psychology*, 10(1), pp. 66-80.
- Gertler M. S. (2003) Tacit knowledge and the economic geography of context, or The undefinable tacitness of being (there). *Journal of Economic Geogrpahy* 3 pp.75-99
- Gertzog R. (2011) Non-Linguistic Challenges for Turkish Students in American Higher Education. *Hunter College, City University of New York – Masters Thesis*
- Hwang, G. J., Tsai, C. C., & Yang, S. J. (2008). Criteria, Strategies and Research Issues of Context-Aware Ubiquitous Learning. *Educational Technology & Society*, 11(2), 81-91.
- Japan Student Services Organization (JASSO) (2011). *International Students in Japan*. http://www.jasso.go.jp/statistics/intl_student/data11_e.html
- Kompler M. (1999) Preventing Stress, Improving Productivity: European Case-Studies in the Workplace. *Routledge Publishing*.
- Lim, K. V., et al. (2002). The development of the Khmer acculturation scale. *International Journal of Intercultural Relations*, 26(6), pp. 653-678.
- Lim, M. Y., Kriegel M., Aylett, R. Enz, S., Vannini, N., and Hall, L. (2011) "Technology-enhanced role-play for social and emotional learning context-Intercultural empathy." *Entertainment Computing* 2.4 pp.223-231.
- Ling R. (2004) The Mobile Connection: the cell phone's impact on society. ISBN: 1-55860-936-9
- Ministry of Education, Culture, Sports, Science and Technology - MEXT. (2008) Framework of the "300,000 International Students Plan" .
- Mirdal G. M. (2006) Stress and Distresss in Migration: Twenty Years After. *International Migration Review. Volume 40, Issue 2*, pp.375-389
- Murphy-Shigematsu, S., and Lee, J. S. (1998) Understanding and overcoming the disillusionment of international students. *University of Tokyo International Center Bulletin* 8: pp.19-42.

- Ogata H., Li M., Hou B., Uosaki N., El-bishouty M. M. and Yano Y. (2010) Ubiquitous Learning Log: What if we can log our ubiquitous learning? *Proceedings for the 18th International Conference on Computers in Education*.
- Ogata H. and Yano Y. (2004) Context-Aware Support for Computer-Supported Ubiquitous Learning. *Proceedings for WMTE*.
- Padilla A. M., Wagatsuma Y. and Lindholm K. J. (1985) Acculturation and Personality as Predictors of Stress in Japanese and Japanese-Americans. *The journal of Social Psychology*.
- Parette, H. P., Huer, M. B, and Scherer, M. (2004) "Effects of acculturation on assistive technology service delivery." *Journal of Special Education Technology* 19 pp. 31-42.
- Rodríguez, M., & Favela, J. (2003). A Framework for supporting autonomous agents in ubiquitous computing environments. System Support for Ubiquitous Computing Workshop. Fifth Annual Conference on Ubiquitous Computing (UbiComp 2003), October 12-15, 2003, Seattle, Washington.
- Sam D. L. and Berry J. W. (2010) Acculturation – When Individuals and Groups of Different Cultural Backgrounds Meet. *Perspectives on Psychological Science July 2010 vol. 5 no. 4* pp.472-481
- Sharples M. (2000) The Design of Personal Mobile Technologies for Lifelong Learning. *Computer and Education*, 34, pp.177-193
- Shick, Aubrey, and Jodi Forlizzi. "Families Divided by Distance: The use of technology products by immigrant Latinos in a new growth area."
- Sousa J. P. (2006) Task-based adaptation for ubiquitous computing. *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, 36(3): pp.328–340
- Srivastava L. (2004) Japan's ubiquitous mobile information society. *Info*, Vol. 6 Iss: 4, pp.234-251
- Stevens C. S. and Lee S. (2002) Reproducing identity: maternal and child healthcare for foreigners in Japan. *Family and Social Policy in Japan: Anthropological Approaches*.
- Sun, Yi. (2012) Chinese students in Japan: The mediator and the moderator between their personality and mental health. *International Journal of Psychology*
- Tilburg M. V. and Vingerhoets A. (2005) Psychological Aspects of Geographical Moves: Homesickness and Acculturation Stress. *Amsterdam University Press • Amsterdam Academic Archive*
- Thom-Santelli, J., Millen, D.R., and Gergle, D. Organizational acculturation and social networking. *Proc.CSCW2011, ACM (2011)*, pp.313–316.
- Valencia-Garcia, D., Simoni, J. M., Alegría, M., & Takeuchi, D. T. (2012). Social capital, acculturation, mental health, and perceived access to services among Mexican American women. *Journal of Latina/o Psychology*, 1, 78-89.
- Wentzel P. (2005) Using Mobile Technology to Enhance Students' Educational Experiences : Case Study from the EDUCAUSE Center for Applied Research. *ECAR Case Study, Volume: 2*, pp.1-22