

報告

学生の授業外学習時間の現状とこれからの課題

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要約：最近の授業改善のFD活動等にも関わらず、学生の自主的な学習時間は減る一方である。ここ2年間に本学で実施された、「学生による授業評価アンケート」を見ても、1コマに対する一週間の学習時間は30分程度と報告されており、「ラーニングライフ調査」においても一週間の平均学習時間は1時間足らずと報告されている。本稿では、その理由と解決策について述べ、授業の学習時間を減らし、代わりに授業外における自律学習の学習時間を増やすことの必要性を議論する。加えて、大学教育改善のために、3つの改善案を船の構造(「船体」、「マスト」、「甲板」)を基に提示する。改善案としては①授業スタイルを「教える」から「学習する」に変えること、②ライフ・スキルを授業ではなく、社会的インターアクションの経験を通して身につけること、③学生が自主的に学べるよう、カリキュラム改善すること、以上3点を提唱する。

(キーワード：自律学習、大学教育、授業外学習時間)

Keeping the University of Tokushima Afloat: Enhancing Autonomous Study Outside of Class

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Abstract : Despite our efforts to enhance study time, and faculty development towards better didactic instruction, we have not helped students increase study time outside of class. In-house surveys basically show study time to be less than 30 minutes a week per course. In this paper, we discuss the reasons why and possible solutions. We hope these suggestions lead to discussions on better ways for decreasing student contact time and enhancing autonomous learning practices. To illustrate our discussion of improving the learning environment, we use the metaphor of the university as a ship in which to keep afloat must have a strong: the hull, deck, and keel. First, the hull, or classes, should let learning happen naturally, and literally stop teaching by giving more autonomous learning experiences. Second, the deck, or outside view, is where we argue that students should be given a chance to gain life skills in authentic and natural settings. Finally, the keel, or the curriculum, should challenge students to be more self-directing in their learning.

(Keywords: Autonomous Study, Higher Education, Out-of-Class Study Time)

1. Introduction

In its final minutes of WWII, before it's sinking the Battleship Yamato exploded from the inside when its ammunition detonated. There is a possibility of a similar occurrence in universities, if we fail to transform teachers into facilitators while challenging students to become autonomous learners. This paper addresses the question: Is it possible to increase study time outside of class and promote autonomous learning among the general student population? Our answer is 'yes' from the point of view that all humans have the capacity to learn unless undermined by someone or something, and 'no' because the present learning environment undermines student learning.

Higher education, viewed from the outside and perhaps inside, is "considerably expanded, highly stratified,

overshadowed by competition for admissions, not very demanding for the masses of undergraduate students, important in awarding credentials, but without close links between the subjects of study and subsequent professional tasks" as summarized by Teichler (1997, abstract). Unfortunately, it is well-documented that higher education is the "most resistant to change...lagging behind western societies...[and an]...embarrassment to the world's second largest economy"(Poole, 2003, p. 149). As the OECD¹ suggests, it is time for the universities to make the necessary changes (Takita, 2009).

As the Battleship Yamato, if the necessary changes are not implemented the universities will eventually have a similar ending. It will sink not from pressures outside, such as incoming students or budgets, but from within from the learning environment and instruction. One of the

most important changes, especially in the ‘*zennyujidai*’, or admissions to all, will be the learning outcomes of each student (Sakano, 2009). Learning outcomes especially in terms of lifelong learning skills made way into the educational scene in the 60s through UNESCO (Budge, 2000) and have led the Ministry of Education a decade later to emphasize lifelong learning to prepare for the quick change in the global society, such as information technology. In an age in which students will not know what type of jobs are waiting for them when they graduate, autonomous learning skills are necessary for students to be ready to learn anything autonomously anytime. Recent reports on the promotion of lifelong learning in Japan have added extra emphasis towards its benefit for society (Lee, 2006). In other words, lifelong learning not only for the development of the self in a democratic society, but also for the benefits of social problems from economic, global, and aging society. However, at the core of the argument of lifelong learning skills is autonomous learning directly relating to study time in universities.

This boat metaphor will be used to discuss the initial question. A boat has three essential parts; the deck, hull, and keel. The deck is the visible work-place and the area where sailors are sent; or in the case of the university, it could be learning outcomes and learning environment as it is seen from the outside. The hull, or body of the ship, is where all activity (or inactivity, such as sleep) occurs similar to university classes and extra-curricular activities. Finally, the keel is the spine of the ship which in this case pertains to the curriculum and its outcomes. The time will come when companies will not accept students as “raw material” (Teichler, 1997, p. 276) as they do now, putting more pressure on universities for accountable learning outcomes of its students (Sakano, 2009).

Why the sinking ship metaphor? Niemiec and Ryan (2009) assert that we already have the innate capacity to learn. In other words, we have the will, motivation, learning orientation and readiness to learn as human beings. Learning is not something that has to be motivated extrinsically, but we must reignite the curiosity, creativity, and intrinsic motivation by providing students with a

sense of autonomy, competence and relatedness². Budge (2000) has reviewed the OECD’s plan in pursuit of lifelong learning and suggests focusing on reviving students’ intrinsic motivation and confidence in learning. Hence, if we do not live up to these global standards and create change, we will be doing a disservice to the students as well as to ourselves.

All one needs to do is follow the looks on students’ faces throughout their transition of university life to understand the learning outcomes. Few students enter university not wanting to learn anything and just waste time³. Additionally, few students come into university having no motivation to learn (The University of Tokushima, 2009b). However, after the first couple of classes which do not respect their individual learning preferences, needs, and wants as college students and a chance for self-direction and autonomous learning, they spend their university life half-asleep just going through the motions. Nevertheless, they are full of glee when they graduate. Why? They are not happy that they learned something, achieved academically, or want to continue their studies. Quite the contrary, they are happy for not having to study anymore. It is easy to see that we are not doing our job as an institution of higher ‘*learning*’ if we are not promoting autonomous learning that promotes intrinsic motivation which leads to lifelong learning⁴.

2. Hull

Going back to the metaphor, the hull might be seen as the university classes. The following are comments from students leaving or going to the classroom:

- I don’t know why I am studying this?
- Why do I have to do this assignment?
- What’s the point of class?
- What’s my teachers’ name?
- ...*sensei* makes me not want to study...
- So...boring!
- I will just study.... in another class.

They fail to see the meaningfulness in their studies, have no relationship with the teachers, and are just tired of the conveyor belt routines. The Learning Life Survey

(The University of Tokushima, 2009b) of 3785 students shows that 30 to 50% of students felt they would not gain any skills and knowledge in university. Furthermore, when they were asked how much they understood, students who answered in the range of understanding 60 to 70% were the most, and no more than 25% of students answered to understanding more than 25%. We feel we are working on the wrong part of the bell curve. To increase understanding, again, autonomous study time outside of class is essential.

To avoid all these comments, we need to escape our traditional techniques and evaluation methods, such as, final tests or presentations for course evaluations and teacher-centered classes. The mission statements of the university and general education consists the keyword ‘learner autonomy’ (The University of Tokushima, 2008a, 2008c). On the other hand, most syllabi have yet to add the word ‘autonomy’. We need a bottom-up constructive alignment that matches these goals in all courses leading to more effective classroom methods. Once these goals and methods of attainment are visible, students will understand the ‘why’ of their learning. To gain a better understanding of the ‘how’, we need more learner-controlled courses which lead to autonomous learning and higher level thinking (theorizing, applying, and relating) opposed to the low level thinking methods of note-taking and memorizing (Clifford, 1999). A learner-controlled course is a course in which the learner takes part in all decision making from syllabus design to assessment. Learner-controlled courses in which students participate in syllabus design, collaborative learning, and self- and peer-assessment have shown evidence to increase motivation and confidence, *inter alia* (Clifford, 1999).

Students may not be able to adapt to learner-controlled classrooms from the outset. Therefore, interventions to know how to learn academically are necessary (Wilson, Damiani, & Shelton, 2002). In recent evaluations of freshman orientations, students commented to understanding the importance of active learning, goals, and general education (Nariyuki & Mori, 2009). However, in this one-week single orientation cramming knowledge

in the first week of college life, it is a wonder how many students are able to continue with these attitudes without constant reevaluation. For instance, some universities use not a crammed weekly orientation but a year-long foundation course in which student are advised in how to become learners while doing tasks at their own pace. (i.e. (a) writing a report that matches their dreams and the universities goals and objectives and how the curriculum suites their needs, (b) visiting the library or other on-campus student supports centers and understanding its purpose and how to use it as an assignment, (c) going to one lecture and asking a question or writing a report matching the teachers purpose to understand its objective, or (d) rethinking how to attend the traditional lectures) In other words, learn by doing and through your mistakes. Students need the opportunity to understand the need of assigned pre-reading, understanding class goals, reading the syllabus, or the electives system, so students are ready with questions, interested, curious, intrinsically motivated, or see the connections. These are all essentials of learning. Then, listening to a 90-minute long speech could warrant meaningful learning. For meaningful learning experiences and being effective in promoting self-direction and autonomous learning, a course should begin with the essential components of (a) confidence in gaining skills, (b) linking the objectives to the near-future, (c) association with the teacher as a facilitator, (d) secured environment for learning, and (e) self-governance in their studies (Fukuda, 2009).

3. Deck

Also in need of change would be the deck, or the environment in which students are placed in to learn and the outcomes as seen from the outside. A quick Internet search will give one a good idea of what everyone is saying about recent students such as:

- They can’t communicate.
- They don’t have motivation.
- They don’t have general knowledge.
- They can’t learn.
- They are not autonomous.
- They can’t think.

- They can't problem solve.

The list goes on and on. Though universities are putting much effort into helping students gain these skills, most of the time they just seem to keep the examination difficult because it “is by far the most effective and convenient insurance that students will be of high ability, and hence easier to education” (Poole, 2003, p. 159). Universities do not realize that most high school students are expected to prove their intellect on fact-oriented multiple-choice exams (McVeigh, 2002); they certainly do not have time to acquire life skills. The above are all life skills which are not gained by being lectured on them or writing reports on them, but through actual real-life experiences.

We need to let learning take place naturally, and therefore, revive the intention of Japan's original 1949 Law on Adult Education for establishing ‘*kominkan*’, or community centers for these skills (Kawachi, 2008). What not a better way to get the ‘*kominkan*’ out of the trouble they are in now (Lee, 2006). The university is closed even with great efforts from teachers inviting people outside to study (Mitsunaga et al. 2009; Ohashi et al. 2009). However, this is affecting just a handful of students that already love learning and mature students who have already developed lifelong learning skills. Nevertheless, most people outside the university do not like to learn because they relate studying to listening to teachers or memorizing for a test. Studying equaling exam prep and learning equaling rote memorization is the same attitude among students as well (McVeigh, 2002). This attitude “encourages apathy toward learning” (Poole, 2003, p.155), and we wonder why students do not study outside of class as well.

Again, all do want to learn (not study); they just need the opportunity or understanding of what learning entails. Therefore, we need to illustrate that learning is not only desk study, but even better, it is while doing something naturally and unconsciously, for instance when we play sports or learn an instrument. We must create opportunities, for instance, constant areas of English usage (Fukuda & Sakata, 2009), areas for reading or talking to teachers, students, and mature students to use freely (Mitsunaga et al. 2009), using Social Networking

Services to build communities (Sagayama et al. 2009) among other social interaction learning environments. Could this be done in the community centers? Is it possible to show not only students but everyone that learning is not listening to lectures or rote memorization?

Extremely speaking, one problem with the university not being academic is the numerous clubs and circles taking time and energy of students. As McVeigh (1997) claims, clubs and circles take up a major part of school life which they pour their energy into rather than classes. The goals for university clubs and circles is to meaningfully learn, broaden horizons, acquire the rich information, and develop the entire person (The University of Tokushima, 2009d). Putting them in the community centers in which younger and elders can participate would be a much more fruitful experience. What not a better way to learn than from elders and by teaching younger people. We can only begin to imagine all the life skills they will gain, not to mention the stories of graduates regretting their college life, and motivating them to study. We should just keep one or two teams with the number of members limited and support them more financially, or even professionally. What not a better way to advertise the university which is in demand in this age of the declining birth rate and pressures of university survival.

4. Keel

Thirdly, and most importantly, the boat will not stay afloat if the keel is not intact. For the university, the spine is its curriculum. We would like to focus our discussion on the first two semesters of college life. At this time, students for the most part will be required to take General Education courses. Below are common teacher complaints of students upon returning to their laboratories after class:

- Students only study for the test.
- Students don't study outside of class.
- Students are not active.
- Students are always sleepy in class.
- Students have low academic performance.
- Students don't know how to study.

- Students don't read syllabus.

These are among many others. It is neither the teachers' nor the students' faults for feeling so. We would like to argue that it is the curriculum with no scientific backing that is influencing these comments. A quick look at the time-allotment for obtaining our learning outcomes could bring forth possible solutions. The handbook for the Center for General Education advises students to fulfill two hour study requirements per class for review and preparation. Consequently, if a student takes an average of 12 classes a week (some take up to twenty), the schedule might look like the following:

Student schedule (Average 12 classes a week)

- 1 day = 3 classes = 4 hours 30 minutes
- Review and prepare = 6 hours
- Club = 2 hours
- Homework or reports = 3 hours
- Meals = 2.5 hours
- Part-time jobs / driving school / upperclassman research assistance = 4 hours
- Sleep? Relax? Talk with friends? Study for other certification? Hobbies? Paperwork? Make up classes if failed?

With schedules like these, when will students sleep, relax, communicate, or gain life skills? The only time to sleep or relax is in other classes, and there is no time or need to communicate or gain life skills due to the fact that most everything is planned out. Knapper and Cropley (2000) assert that providing "packaged plan[s] will minimize student autonomy in planning and guiding of their own study" (p.97). This is definitely the case in Japanese universities in which all scheduling and study material are provided for them; especially with only 'contact hours' necessary for acquiring credit. A curriculum providing a gradual release of responsibility from the outset will definitely lead to better autonomous learning skills. Looking at more productive universities, in a 1-semester 6-credit course students meet for 90 to 120 minutes a week and half of the credit is attained by individual work outside of class in any field. In work outside of class,

students write reports or collaborate on projects among other things all in an individual field of interest with the teacher or teaching assistant as a facilitator. Interestingly, many English teachers having trouble talking about hobbies to students because most answer 'sleep'. We complain that they study only during the tests, and not active, or do not study. "Despite our repeated emphasis on student autonomy in learning, and our criticism of didactic instructional approaches, university teachers have a key role to play in fostering lifelong learning" (Knapper & Cropley, 2000, p. 299). Are we giving them opportunity to study, or we should say, learn autonomously?

The Learning Life Survey of student study time outside of class has frequently averaged in the 'less than one hour' or 'none at all' range for classes (The University of Tokushima, 2009b). Furthermore, year-end course evaluations frequently show study time to be under 30 minutes in most cases, as can be seen in Figure 1 below. Figure 1 illustrates the year-end course evaluations by students the past two years. Questions one to four pertain to the students themselves and questions five to seven to the teachers. The same can be seen in Figure 2, in the new survey, in which question two concerns study time outside of class.

For a follow-up on these results, we asked 25 students from Engineering, Humanities, and Medicine departments what they thought about these results and why they do not study autonomously. Though most felt review and preparation was only for tests and study only for homework, most claimed there was no time to study even if they wanted to or not. Most answers students gave for not studying outside of class were as follows:

- I only need to study for the test to get credit.
- I only need to study for homework to not get in trouble.
- I don't know how to study autonomously.
- Why study outside of class?
- I have a priority list of my classes. (i.e. major related then general education)
- The teacher doesn't tell us what happens next week, so we can't study.

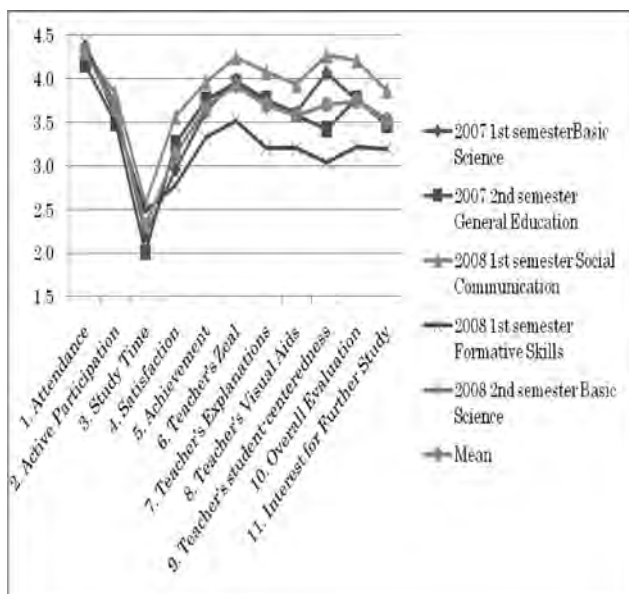


Figure 1. 2007-2008 Year-End Course Evaluation Results.

*The following 5-point Likert-scale was used. 1 point for no study, 2 for 30 minutes a week, 3 for 60 minutes, 4 for 90 minutes, and 5 for over 2 hours.

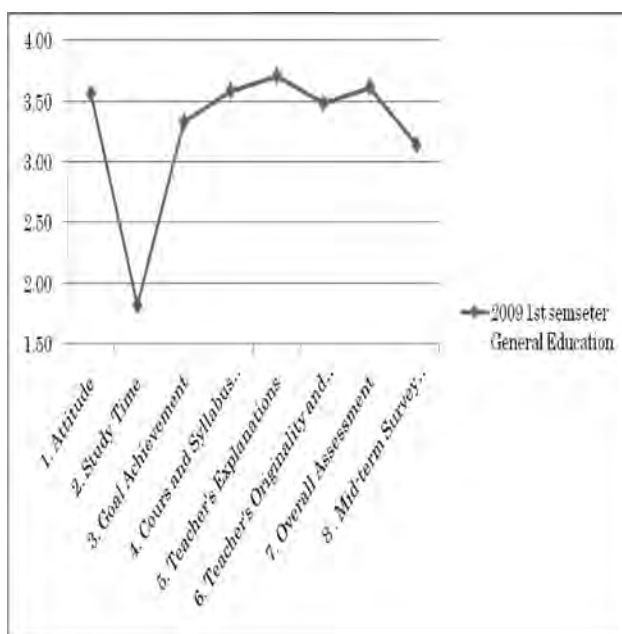


Figure 2. 2009 1st Semester Course Evaluation Results.

- I didn't read the syllabus, so don't know what to do.
- I have to work part-time and participate in club activities.

- I have weekly reports and tests so there is no time.
- We don't get much time to rest, so I will take my free time for relaxing.

Considering the time allotment students are required and have in their university life, on average they need 120 credit hours to graduate. On average, close than half of these classes are taken in their first year. These are all contact hours, unlike some universities in other parts of the world in which half are contact hours and half autonomous studies hours. This just leads to burn out and not autonomous study in the third or fourth year. Who decided that 120 hours would equal a student to master a field (Harris, 2002)? Or that it takes 15 to 16 weeks to master a course (Shedd, 2003)? Interestingly, this credit system started in the US, in 1910, it was just 'assumed' sufficient, and all the professors agreed because if accepted the union would finally give them pension; without any scientific backing (Shedd, 2003). Though it is not necessary to lower the numbers, it might be necessary to lower the contact hours. This would not only give students more trial and error through autonomous study, but also give teachers more time to focus on students having fewer classes and create better research. Research shows class scheduling as a variable in performance (Henebry, 1997). Therefore, it is time to reevaluate the pressure we put on students. We feel that even most teachers would not remember content if they attended 15 90-minute lectures on different topics a week.

Furthermore, did we ignore the University Establishment Standards (MEXT, 2009) which require that we limit the number of credits? Article 27-2 clearly states that universities must limit the number of credits a student can take a semester to ensure effective learning. One has to ask: Do we actually care if they actually learn? Do we put them on our factory conveyor belt for education for the masses or to gain numbers? Or is it ok to just accept the fact that as long as they have contact hours with the subject they have learned? We suggest lowering the number of subjects' taken and adding comprehensive exams each year not only for medical students but all students. This can really measure what they have retained

or how much they developed cognitively. Because students take so many classes a week in their first two years they are on the conveyor belt, so certainly they will not and cannot study the third and fourth year for research unless forced to. They also have a hard time deciding what to do because they have not experienced how to do research in a step by step process. This process usually ends up in teachers deciding research topics for students extrinsically or worse, writing the thesis for them. The time has come to reevaluate the learning environment and time-allotment placed on our students. These situations seriously challenge students detrimentally and actually prevent authentic learning because students cannot see nor have the time to feel the joy in learning or pursuing a subject of interest.

5. Conclusion

In sum, the university must challenge itself and direct thought and care towards the students thinking outside the box. The problem cannot be solved with petty solutions. We need a big change from within. To use Smith's (1998) metaphor, we can no longer continually scoop water out of the sinking boat fixing problems with petty solutions. We must fix the problem at its core which in this case would be to patch up the hole at the bottom of the boat. Universities are educational institutions and not factories. First, we must fix the hull or classes and let learning happen naturally, and literally stop teaching and give more autonomous assignments. Second, we must keep the university a place where students can be challenged academically and let life skills be gained in natural settings. Finally, the above changes will be ineffective if we do not have a strong keel. Therefore, we must have a curriculum that challenges students to be self-directing in their learning. Unfortunately in present circumstances students are detrimentally challenged by the situations they are in usually caused by the curriculum time constraints (Kuh, 2007). Students always being told what to do, certainly would do nothing the minute they feel they could take a break. One model student once mentioned she loves studying physics and English, but her schedule does not allow her to. Why is she controlled

by outside forces that undermine her intrinsic motivation to learn? One could argue for skills training in time-management. This could be solved by implementing meaningful interventions during the semester long foundation courses as mentioned above (Wilson, Damian, & Sheldon, 2002). Evidence in motivation research shows learning motivation is undermined by the next step in their 'academic path' to graduation (Niemeic & Ryan, 2009). In other words, without learning continuous encouragement of autonomous learning, these skills are undermined (Fukuda, 2008). The university has many problems which are created from within. We are self-handicapping ourselves, and need to provide a better academic environment in which students authentically gain life skills through experience, in learner-controlled classes, and most importantly a curriculum that allows for time to actually learn. If so, we will have a great unsinkable boat that looks good, strong and works in all aspects of learning including autonomous learning that leads lifelong learning for a greater society as a whole.

Footnotes

- ¹ Organization for Economic Co-Operation and Development's Review of Tertiary Education: Japan.
- ² The three psychological needs of autonomy, competence, and relatedness are the three pillars of Deci and Ryan's (1985) self-determination theory. A plethora of evidence in the educational scene has strongly supported the enhancement of the three needs in the classroom (Niemeic & Ryan, 2009). For instance, to enhance autonomy the teacher could give students choices in assignments and evaluations, for competence the teacher must guide students into gaining the self-efficacy of learning, and for relatedness the teacher should consider himself a facilitator of learning so to speak, instead of the 'bearer of all knowledge' to be passed on autocratically.
- ³ When asked if they had a dream or goal after graduating, the Life Learning Survey (The University of Tokushima, 2009b) showed students in all departments except for no more than 10% answered they did. Furthermore, when asked if they believe in the university to help them

achieve their goals through education, in all departments except one more than 50% of the students answered yes.

⁴ Kawachi (2008) identifies four intrinsic motivators for lifelong learning: vocational, academic, personal, and social. He gives suggestions in how these can be initiated by teachers. Vocational intrinsic may be enhanced by showing students how useful the subject will be in the future and academic by the teacher enthusiasm on the topic. He divided personal into three subcategories by challenging students through (a) sensory-curiosity, such as effective use of visual aids, (b) cognitive-curiosity, such as giving quick feedback on how to repair inconsistencies, and (c) fantasy, such as putting the student in future career contexts while learning. Finally, social intrinsic is the different vectors of interaction, such as teacher-student or student-student.

References

- Budge, D (2000). *Motivating Students for Lifelong Learning: What works in innovation education: Education and skills*. Centre for Educational Research and Innovation, Paris; OECD Publishing.
- Clifford, V. A. (1999). The development of autonomous learners in a university setting. *Higher Education Research & Development*, 18(1), 115-128.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Harris, J. (2002). *Brief history of American academic credit system: a recipe for incoherence in student learning*. Stanford University.
Retrieved June 20, 2009, from <http://www.stanford.edu/groups/quality/BriefHistoryofAmericanAcademicCreditSystem.pdf>.
- Fukuda, S. T. (2008). *Development of Required English Communication Courses for Japanese university EFL students: Enhancing motivation through project based learning*. Unpublished Master's thesis, Ehime University, Matsuyama, Ehime, Japan.
- Fukuda, S. T. (2009). Improving English through Meaningful Learning: The outcomes of the English Support Room. *The University of Tokushima Education Conference: 2009*. (pp.58-59). Tokushima, Japan: The University of Tokushima.
- Fukuda, S. T., & Sakata, H. (2009). Initial investigation of a meaningful language learning center: Four principles of our English Support Room. *Journal of University Education Research*, 6, 120-128.
- Henebry, K. (1997). The impact of class schedule on student performance in a financial management course. *Journal of Education for Business*, 73(2), 114-120.
- Kawachi, P. (2008). Educational reform in Japan for lifelong learning. *International Journal of Lifelong Education*, 27(5), 509-516.
- Knapper, C., & Cropley, A. J. (2000). *Lifelong Learning in Higher Education*. Sterling, VA: Stylus Publishing.
- Kuh, G. D. (2007). How to help students achieve. *The Chronicle of Higher Education*, 53(41), 12.
- Lee, J. (2006). The present conditions and problems of lifelong learning policy in Japan. *Journal of the Research on Lifelong Learning and Career Education*, 2, 19-27.
- McVeigh, B. J. (2002). *Japanese higher education as a myth*. Armonk, New York: M.E. Sharpe.
- MEXT. (2009, October 22). *University Establishment Standards*. Japan. Retrieved June 13, 2009, from e-Gov web site: <http://law.e-gov.go.jp>.
- Mitsunaga, M., Nakae, M., Fukuda, S. T., Saito, T., Kanari, K., Kazumasa, M., & Ohashi, M. (2009). FD activity for a general educational program facilitated by a community for learning composed of students, staffs, and teachers: Meaning as UD (University

- Development) activity. *Journal of University Education Research*, 6, 161-170.
- Niemeic, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7, 133-144.
- Noriyuki, Y., & Mori, A. (2009). *Report of university introductory courses and freshman orientation of the engineering department* (Faculty Development Department; Evaluation Meeting of 2009 university introductory courses and freshman orientation meeting). Tokushima, Japan: The University of Tokushima, Center for General Education.
- Ohashi, M., Nakae, M., Mitsunaga, M., Fukuda, S. T., Sato, T., Kikuti, M., Kagawa, J., & Hirowatari, S. (2009). Reformation of university education and general education: Innovation of novel system of circulation of knowledge by recruitment of volunteers from the local community. *Journal of University Education Research*, 6, 58-69.
- Poole, G. S. (2003). Higher education reform in Japan: Amano Ikuo on 'The University in Crisis'. *International Education Journal*, 4(3), 149-176.
- Sagayama, K., Kanenishi, K., Matsuura, K., Kume, K., Mitsuhara, H., & Yano, Y. (2008). Possibility for supporting students and student behavior on campus SNS. *Journal of University Education Research*, 6, 1-12.
- Sakano, Y. (2009, May 25). *The thus far and from now of COEs and GP*. Paper presented for SAS Research Department, the University of Tokushima.
- Shedd, J. M., (2003). The history of the student credit hour. *New Directions for Higher Education*. 122, 5-12.
- Smith, F. (1998). *The Book of Learning and Forgetting*. New York: Teachers College Press.
- Takita, K. (2009, June 25). OECD calls on Japan to accelerate reforms in higher education. *The Daily Yomiuri*, 14.
- Teichler, U. (1997). Higher education in Japan: A view from outside. *Higher Education*, 27, 275-298.
- The University of Tokushima. (2009a). *Handbook for taking classes at the Center for General Education*. Tokushima, Japan: The University of Tokushima, Center for General Education.
- The University of Tokushima. (2009b). *Learning Life*. Tokushima, Japan: The University of Tokushima, Center of University Extension.
- The University of Tokushima. (2009c, July 10). *The mission and philosophy of the University of Tokushima*. Retrieved July 31, 2009, from The University of Tokushima web site: <http://www.tokushima-u.ac.jp/article/0010904.html>.
- The University of Tokushima. (2009d, August 21). *The association of extra-curricular activities*. Retrieved December 15, 2009, from The University of Tokushima web site: <http://www.tokushima-u.ac.jp/article/0012015.html>.
- Wilson, T. D., Damian, M., & Sheldon, M. (2002). Improving the academic performance of college students with brief attributional interventions. In J. Aronson (Eds.), *Improving Academic Achievement* (pp. 91-110). New York: Academic Press.