

**Coordinating Theoretical Studies and Practical Studies:  
A Case Study of the Living Environment Studies Education Specialization  
at the Graduate School of Aichi University of Education**

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### **1. Introduction**

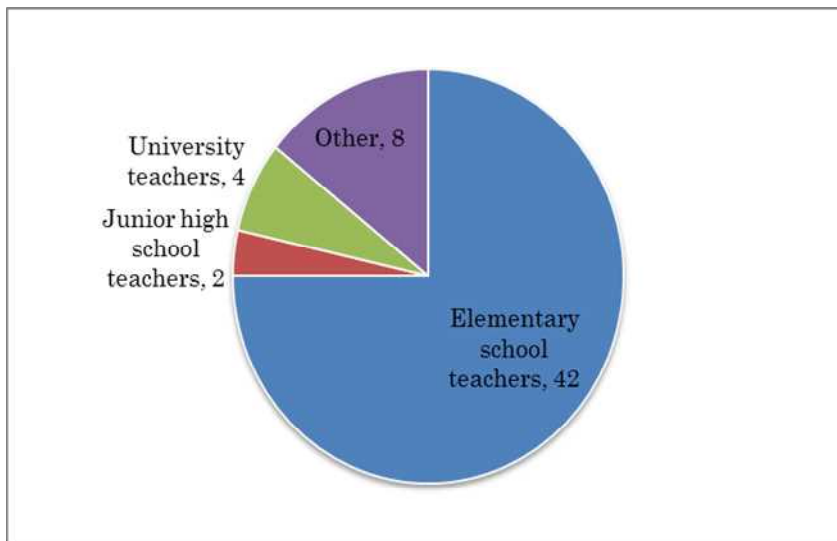
The Living Environment Studies Education Specialization was established at the Graduate School of Aichi University of Education in April 2002, and is engaged in research on theory and practice in the area of Living Environment Studies and Integrated Studies Education. These subjects and classes emphasize hands-on learning, inquisitive learning, and exploratory learning based on children's interests and concerns, problems that are familiar to children and topics which cut across subjects. This approach addresses the objective of enabling students to develop the qualities and abilities needed to define their own tasks, learn and think on their own, make their own decisions, and solve problems.

In this paper we introduce and explain our approach to coordinating theoretical and practical research in this specialization. The objective is to cultivate both research and practical abilities. In addition to regular courses, graduate students actively participate in workshops at schools both inside and outside Aichi Prefecture, and training programs for in-service teachers held by the Aichi Prefectural Education Center. Students also assist teachers at school by working as volunteers one day a week for a year-long period. Furthermore, they are required to make presentations at academic conferences and write papers for the department journal.

### **2. Number of Current Graduate Students and Graduates of the Specialization and Places of Employment of Graduates**

There are currently 8 graduate students in our specialization: 5 non-working students (who advanced directly from the undergraduate level), 1 in-service teacher, 1 retired principal from an elementary school, and 1 associate professor at a university. Two are graduate students in our university's long-term enrollment course. There have been 56 graduates from our specialization over the past twelve years. Among these graduates, there are 42 elementary school teachers, 2 junior high school teachers, 4 university instructors (a specially appointed professor, two associate professors, and a full-time lecturer). Eight graduates fall in the "other" category.

Figure 1  
 Graduates' Place of Employment



### 3. Regular Courses of Our Specialization at the Graduate School of Education

A master's thesis and 30 credits are needed to complete the Living Environment Studies Education Specialization of the Science of Human Development and Education Course. These thirty credits must include two credits of courses in the Pedagogy Specialization, two credits of courses in the Educational Psychology Specialization, 10 credits of courses in the Living Environment Studies Education Specialization, four credits of courses relating to School Subjects Pedagogy, and four credits of courses in Special Research, with the remaining six credits to be taken in free elective courses.

Table 1  
 Courses in the Living Environment Studies Education Specialization (2015)

Course Name	Credits
Educational Ideas about Living Environment Studies and Integrated Studies	a2
Special Lecture for Curriculum of Living Environment Studies and Integrated Studies	a2
Subject Matter for Living Environment Studies and Integrated Studies	a2
Content I of Living Environment Studies and Integrated Studies	a2
Content II of Living Environment Studies and Integrated Studies	a2
Content IV of Living Environment Studies and Integrated Studies	a2
Education for Cooperation between Kindergarten and Elementary School	a2
Special Topics I on Living Environment Studies and Integrated Studies	a2
Special Topics II on Living Environment Studies and Integrated Studies	a2
Research for Practices I about Living Environment Studies and Integrated Studies	b2
Research for Practices II about Living Environment Studies and Integrated Studies	b2

Research for Practices III about Living Environment Studies and Integrated Studies	b2
Seminar on Curriculum for Living Environment Studies and Integrated Studies	b2
Seminar on Educational Methods of Living Environment Studies and Integrated Studies	b2
Seminar on Subject Matter Development of Living Environment Studies and Integrated Studies	b2
Seminar on Comparative Lesson Study of Living Environment Studies and Integrated Studies	b2

Five courses and 10 credits are required to complete the program, but normally graduate students in the Living Environment Studies Education Specialization obtain at least twice that number of credits.

#### **4. Approach to Coordination between Theoretical and Practical Study**

In addition to completing a master thesis and obtaining credits from the above regular courses, our specialization has had the following requirements since its establishment in 2002:

- Two or more presentations at academic conferences
- Completion of two or more academic papers
- Participation in National Conference of Japanese Association for the Education for Living Environment Studies and Integrated Studies
- Participation in Symposium of Japanese Association for the Education for Living Environment Studies and Integrated Studies
- Participation in research discussion groups at Affiliated Schools of Aichi University of Education, Nagoya Primary School and Okazaki Primary School
- Participation in training programs for teachers with 5 years of experience held by the Aichi Prefectural Education Center.
- Participation in training programs for teachers with 10 years of experience held by the Aichi Prefectural Education Center.
- Assisting teachers as a volunteer at school one or two days a week for one or two years in consultation with the student's academic supervisor.

In addition, some graduate students provide support as teaching assistants in undergraduate courses in Living Environment Studies Education at the Aichi University of Education. If possible, they participate in research discussion groups at Affiliated Schools of Aichi University of Education, Nagoya Junior High School, and Okazaki Junior High School, Kindergarten, and School for Special Needs Education. Some students also participate in research discussion groups in Living Environment Studies and Integrated Studies, and training programs within schools in Aichi or other prefectures.

As indicated above, graduate students in this specialization are engaged in more than just academic research on theories in the field of Living Environment Studies and Integrated Studies

Education. They also have many opportunities for involvement in educational practice in various forms, such as: (1) Observing numerous classes through research discussion groups at schools, and participation in discussions based on those observation records; (2) Participating in training programs together with in-service teachers, discussing results and issues relating to their educational practice, and reflecting on their educational practice based on theories of Living Environment Studies and Integrated Studies Education in areas such as curriculum, teaching, class management and evaluation; and (3) While taking regular classes in graduate school together with fellow students who are in-service teachers and retired principals, listening to the explanations of university instructors on the relationship between their practical experience and theoretical research, and discussing that relationship among graduate students.

Furthermore, in writing their master's theses, there are many informal situations and venues for discussion among non-working graduate students and graduate students who are in-service teachers and retired principals regarding the nature of practical research, based on theoretical research. Graduate students in this specialization gain experience observing, gaining insight about, and reflecting on educational practice based on theoretical research in an intensive manner. In addition, when their theoretical research for their master's theses gradually comes together, they become able to observe, gain insight about, and reflect on classes in Living Environment Studies and Integrated Studies Education based on their own theoretical frameworks.

### **5. A Case of Actual Coordination between Theoretical and Practical Study by a Graduate of the Specialization**

Yasuhiro Yamada (author b; a graduate of the specialization) was enrolled in the master's course from April, 2012 to March, 2014. He now works at Oharu Elementary school, Oharu-cho, Aichi. His research and master's thesis were on the topic: "A Study of Problem-Based Learning by John Barell: The Potential for Applications to Inquisitive Learning in Living Environment Studies and Integrated Studies." In addition, as part of his pursuit of theoretical studies, Yamada made presentations at academic meetings three times, wrote four academic papers and jointly authored an academic book. Details are as listed below:

[Presentations at academic meetings]

- 21<sup>st</sup> National Conference of Japanese Association for the Education for Living Environment Studies and Integrated Studies, Tokushima University, held on June 9, 2012, Presentation on a Freely-Chosen Topic, "Research on Living Environment Studies Classes to Make Children Talk More Actively: Clues from Cooperative Learning in the United States"
- 22<sup>nd</sup> National Conference of Japanese Association for the Education for Living Environment Studies and Integrated Studies, Akashi High School in Hyogo Prefecture, held on June 22, 2013, Presentation on a Freely-Chosen Topic, "A Study of Inquisitive Learning with a Sense of Urgency: Clues from a Problematic Scenario by John Barell"
- 25<sup>th</sup> National Conference of Japan Association of American Educational Studies, Sophia

University, held on September 28, 2013, “A Study of Problem-Based Learning by John Barell”

[Academic papers and publication of academic book]

- Shinji Nakano, Yasuhiro Yamada (2013). A Study of Cooperative Learning in Living Environment Studies and Integrated Studies: Comparison with *Learning Together* in the United States, *Bulletin of Aichi University of Education*, Vol. LXII (Educational Sciences) pp.11-18
- Yasuhiro Yamada (2013). A Study on Scaffolding for Children’s Inquisitive Learning: Clues from Problem-Based Learning by J. Barell, *Living Environment Studies and Integrated Studies Education*, 11, pp. 212-224
- Yasuhiro Yamada (2014). A Study of Inquisitive Learning in Living Environment Studies Based on Problem-Based Learning by John Barell: Practice of Living Environment Studies for the First Grade “Our Paper Airplane, Fly Far: Olympic Games at an Affiliated Elementary School in 2013” *A Report of a Joint Study between Aichi University of Education and Affiliated Schools*, Aichi Prefectural Education Center
- Yasuhiro Yamada (2014). “A Study on Inquisitive Learning in Integrated Studies: Based on Problem-Based Learning by John Barell” *Journal of the Department of Living Environment Studies, Living Environment Studies and Integrated Studies Education*, 22, pp.109-118
- Shinji Nakano, Satoshi Ohmachi (2013). *Creating Inquisitive and Cooperative Learning: Theory and Practice in Living Environment Studies and Integrated Studies Education*, Sankeisha, (\*joint author)

In addition to these theoretical studies, Yamada assisted teachers as a volunteer at a school once per week for a year and half, supported undergraduate courses in Living Environment Studies Education as a teaching assistant at the Aichi University of Education, and participated in training programs for teachers with 10 years of experience held by the Aichi Prefectural Education Center. Furthermore, he actively participated 41 times over two years in research discussion groups at schools both inside and outside Aichi Prefecture where active research in Living Environment Studies and Integrated Studies is ongoing. Records show that he participated in research discussion groups about twice a month. Yamada’s practical research is outlined as follows:

[Teaching assistant as a school volunteer]

- Shobata Elementary School, Aisai-shi, Aichi, September 2012 to March 2013, every Thursday, all day
- Affiliated School of Aichi University of Education, Okazaki Elementary School, April to March 2013, every Tuesday, all day

[Assistant in practical studies]

- Teaching Assistant to Professor Shinji Nakano, Research about Living Environment Studies BI, Monday 2nd hour class, first term, 2014
- Teaching Assistant in training programs for teachers with 10 years of experience held by Aichi Prefectural Education Center, August 19, 2013
- Participation in Faculty Development for University Teachers, February 27, 2014

[Research discussion groups at schools inside and outside Aichi Prefecture with participation on two or more occasions]

- Nagoya Elementary School Affiliated to Aichi University of Education, Aichi
- Okazaki Elementary School Affiliated to Aichi University of Education, Aichi
- Nagoya Junior High School Affiliated to Aichi University of Education, Aichi
- Koromoura Elementary School, Kariya-shi, Aichi
- Horikawa Elementary School, Toyama-shi, Toyama
- Elementary School Affiliated to Nara Women's University, Nara
- Elementary School Affiliated to Joetsu University of Education, Niigata
- Ina Elementary School, Ina-shi Nagano

In addition, Yamada created a unit and taught 8 lessons of Living Environment Studies for the first grade. The unit was called “Our Paper Airplane, Fly Far! Olympic Games at an Affiliated Elementary School in 2013” and was taught at Okazaki Elementary School Affiliated to Aichi University of Education, where he assisted the teacher as a volunteer from November 26 to December 11, 2013 (Photo 1). The purpose of this practical research was to verify the validity of Yamada's original theoretical framework. The results showed that this theoretical framework could be applied to inquisitive learning in Living Environment Studies. He was ultimately able to complete his master's thesis through coordination between theoretical and practical research.



(Photo 1) Yamada's unit in practice

After graduating, Yamada wrote a paper on his theoretical and practical research: “An Application of Problem-Based Learning by John Barell to Living Environment Studies to Create a Foundation for Inquisitive Learning, and its Significance.” This paper was reviewed by editorial committee members, and accepted for *Living Environment Studies and Integrated Studies* no. 22, published by Japanese Association for the Education for Living Environment Studies and Integrated Studies. He received the 13<sup>th</sup> Research Encouragement Award from the

association for this work.

In this section, we have described Yamada's situation regarding coordination on equal terms between theoretical and practical research. Upon first entering the department, Yamada accounts that his theoretical framework for Living Environment Studies, integrated studies and his own research were not well developed in his mind. He could therefore not observe and gain insight on various practices through his theoretical framework even through actively participating in research discussion groups at schools. However, the department offers frequent opportunities for theoretical research, including making presentations at academic meetings and writing academic papers, as well as practical research such as working as a volunteer teaching assistant for teachers in schools and participating in research discussion groups at schools inside and outside Aichi Prefecture. These opportunities allowed Yamada to make a habit of observing, gaining insight and reflecting on the practice of Living Environment Studies and integrated studies through his original theoretical framework. For example, he gained the ability to observe what children do and say within the theoretical framework created during his study, and children's actions and speech helped to deepen his understanding of the complicated theoretical framework. In particular, Yamada's practical studies at Okazaki Elementary School Affiliated to Aichi University of Education enabled him to verify whether his original theoretical framework could apply in practice in Living Environment Studies and integrated studies. That is, this practical study allowed him to coordinate on equal terms between theoretical and practical research. His receipt of a Research Encouragement Award from Japanese Association for the Education for Living Environment Studies and Integrated Studies reveals that there is a sufficient degree of coordination between theoretical and practical research in our department.

Furthermore, the habit of observing, gaining insight and reflecting, which Yamada developed in this department, is beneficial toward creating units in Living Environment Studies and Integrated Studies at his elementary school, and analyzing what children learn in each lesson.

## **6. Conclusion**

We do not believe that increasing the sophistication of teacher training is a matter simply of providing longer hours for student teaching during graduate courses than at the undergraduate level, or of making students do their practical research via empirical knowledge based on practical experience. If that is what "increasing sophistication" means, then bearing actual responsibility as a teacher is also involved, and the best approach is for students to graduate from the undergraduate level and begin working as teachers as soon as possible. On the other hand, "increasing sophistication" is not a matter of learning theory dissociated from practice in graduate school either. Practice is not subordinate to theory, and theory is not subordinate to practice. The two must be coordinated in a mutually equal relationship. Therefore, we are also not neglecting practical research via empirical knowledge based on practical experience. In fact, outstanding practitioners, their educational practice, and practical research via empirical knowledge based on practical experience become the subject of theoretical research. There is no need to stress this here, but this is the sort research that has been continuously carried out up to

this point.

In that sense, the approach in this specialization is not new. From the inception of this specialization, we have done no more than try out specific methods and measures for coordinating theory and practice on equal terms. However, there are some in this specialization who have become university instructors by, while working in kindergartens, elementary schools or junior high schools, continually making conference presentations and writing academic papers even after finishing graduate school. In addition, among theses previously written by graduate students or those who have finished graduate school, 11 have been published in the peer-reviewed journal *Seikatsuka & Sogo* (The Japanese Journal of Education for Living Environment Studies and Integrated Learning). Of these, three received the Research Encouragement Award from Japanese Association for the Education for Living Environment Studies and Integrated Studies. This is clearly the result of theoretical research in this specialization. However, a remaining task is to conduct long-term survey research on graduates concerning how this sort of practical research based on theoretical research works effectively in improving the complexities of education practice and building teacher competence—areas that exist while being affected by and exerting effects on various other factors. This will be a research topic for the future.

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