Teaching Design to High School and Vocational School Teachers: The HRDI Experience in South Korea

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Introduction

The Republic of Korea is one of the so-called Asian Tigers. It earned this moniker because of its phenomenal rise as a manufacturing center in Southeast Asia. Moreover, it has subsequently achieved a design presence in the international marketplace. Companies such as Samsung, Hyundai, and LG have clearly branded South Korea as an industrial and design force with a potential to not only meet and but also to surpass other Southeast Asian economies.

This meteoric rise of the Korean industrial sector is the result of several important factors, including international trade consideration for a developing nation and significant government intervention and support. Factors such as these have provided the foundation for a strong national industrial economy, but they do not necessarily guarantee an international one. That is, international economic markets can impose conditions that cannot be addressed only by a nationalistic agenda. For example, the freedom of choice implicit in consumer behavior in a foreign market cannot be controlled by a government policy in the home country. Thus, the American consumer who is looking for a new car will make a choice among many automobiles in ways that the national economic policies of South Korea cannot control. This is where design plays a role.

South Korean officials– political as well as industrial– realized that if the industrial economy was to grow it had to rely on exports. As a result, South Korean products would need to meet the existing design standards in the international marketplace. In the past, this strategic direction had proven to be very effective for other Southeast Asian economies such as Japan, Taiwan, and Singapore. South Korea was no different. Consequently, design was promoted by government-funded agencies, design education became common in many of the country's universities, young Koreans were sent abroad for graduate design education, and corporations began to incorporate design in their strategic activities. These initiatives ultimately positioned South Korea as a Southeast Asian center of design, even more so when several international design conferences were held in Seoul, the most significant one being the 2001 Congress of the International Council of Societies of Industrial Design.

Korea University of Technology and Education

The Korea University of Technology and Education (KUT) was established in 1991. There are approximately 130 full-time faculty members and 2,200 full-time students enrolled in programs of engineering, architecture, and design. KUT offers undergraduate and graduate degrees in most of its programs and some doctoral degrees. Many of the graduates from

KUT's design program have become designers in industry, members of research institutes, or teachers in vocational and technical schools.

Human Resources Development Institute

The Human Resources Development Institute (HRDI) was founded in 1997 and is situated on the campus of KUT. Its mandate is to provide continuing education to teachers in high schools and vocational schools and to provide up-to-date knowledge and skills to employees of various industries. A major HRDI initiative is the Invited Overseas Expert Program. Since 1999, HRDI has invited about eighty foreign experts in the areas of engineering, design, and teaching methods.

The Invited Overseas Expert Program

HRDI— under the auspices of the Invited Overseas Expert Program— invites recognized authorities from around the world to give five-day seminars or workshops on a specific topic or area of expertise. The program follows a well-defined set of guidelines. Visiting experts are provided with an honorarium and all expenses are paid. During the stay visiting experts are offered lodging on or off the campus, and there are many opportunities to enjoy local attractions.

The program has a well-defined format for the five-day seminar or workshop. Classes begin on Monday afternoon and finish at noon on Friday. There is a total of thirty-one hours of instruction. Workshops take place in up-to-date teaching and studio facilities, and most types of equipment, e.g., computers and projectors, are available. Teaching supplies are provided. Enrollment ranges from a minimum of twelve students to a maximum of twenty.

Case Study 1: Planning Design Projects (July 2002)

Background: As well defined as the structure of Invited Overseas Expert Program may be, there is latitude with the pedagogy of the workshop. Lectures, laboratories, and design projects can be combined in the most appropriate way given the nature of the circumstances.

For most visiting experts language is an obvious challenge. Few visiting experts have a working knowledge of Korean, and few Koreans have a working knowledge of English. Effective translation is therefore essential if not critical. Translation also creates two other conditions. It reduces the actual time of instruction, i.e., the instructor has to wait for the translation, and it makes one-on-one communication with the students challenging.

Fortunately, HRDI addresses the problem of language in two specific ways. It provides a translator and it publishes the course material for the participants.

Focus: The focus for the workshop was the planning and teaching of design projects for students in high schools and vocational schools. There was a theoretical component (lectures) as well as practical elements in the workshop (design projects). In combination, the lectures and the design projects were to provide fundamental knowledge of and experience in visual thinking, creativity, problem solving, and designing.

The workshop was supported by two documents: a text published by HRDI based on material submitted by the visiting expert, and a CD-ROM of the lectures and PowerPoint presentations provided by the visiting expert.

Participants: There were twelve participants. All were teachers from either high schools or vocational schools except for two graduate students in the design program at KUT. There were seven male students and five female students. Ages ranged from twenty-six to fifty-two.

Activities: Teaching and learning activities were of three kinds: design theory (lectures); design projects; and one-on-one discussions between the visiting expert and the student(s). The outline of the workshop was as follows:

Day 1 (Mon)	**Contact hour(s)**	**Topic**
Session 1	2	Goals and objectives; course outline; autobiography
Session 2	2	Design and the designing process

Day 2 (Tues)		**INFORMATION: Design Knowledge**
Session 3	2	Design History
Session 4	2	Culture and Context
Session 5	2	User Studies
Session 6	2	Materials and Processes

Day 3 (Wed)		**FORMATION: Designing**
Session 7	2	Elements and Principles of Design
Session 8	2	Visual Literacy and Visual Language
Session 9	2	Visual Thinking and Problem Solving
Session 10	2	Designing/Case Studies

Day 4 (Th)		**COMMUNICATION/LEARNING**
Session 11	2	Perception and Communication
Session 12	2	Design Representation
Session 13	2	Learning and Evaluation
Session 14	2	Design Projects Part 1

Day 5 (Fri)		**SUMMARY**
Session 15	2	Design Projects Part 2
Session 16	1	Summary

Observations and Results: The results of the workshop were described in two ways. First, HRDI undertook a teaching evaluation by way of a questionnaire. It principally provided feedback to the institution about teaching effectiveness.

Second, results came from observations and comments by the visiting expert, the resident professor, and the participants. The most important were:

?? The challenge posed by the language situation makes it imperative that design projects should constitute the greater part of the workshop. Clearly, these students– like most other design students– learned by doing.

?? The use of teams– teams of two people but also of four or five– allows for the development of an environment that is cooperative and productive.
?? To be effective, lectures need to be shorter rather than longer and should contain a great deal of visual information.
?? Care needs to be taken in the selection of visual images, especially those of Japanese design and culture given the tumultuous history between Japan and Korea; however, the issue is not as sensitive as it once was and Koreans seem to be more tolerant and acceptable that this issue is behind them.
?? It is necessary for both the lecturer and the translator to identify and agree on the understanding and meaning of the terminology to be used.

Case Study 2: Design and Knowledge (January 2003)

Focus: The focus for the second workshop was design and knowledge, and their place in the broader design agenda. Again, the workshop was meant to educate the participants in such a way that they could contribute to the education of students in high schools and vocational schools.

Much like the workshop in case study 1, the challenge of the second workshop was to impart design skills and knowledge via a series of lectures and design projects. The projects were to provide fundamental knowledge of and experience in how knowledge affects designing.

The teaching and learning activities were equally supported by two documents. The benefits derived from the documents in the first case study were self-evident. Similar documents (a text published by HRDI and a CD-ROM) were provided to everyone.

Participants: The workshop had fifteen participants. Many were teachers from either high schools or vocational schools but a few came from industry. Three students– two graduate and one undergraduate– also attended the workshop. There were ten male students and four female students. Ages ranged from twenty to forty-three.

Activities: The experience derived from the first workshop had an impact on the activities of the second workshop. However, the general format of the first workshop– lectures, design projects, and one-on-one discussions– proved to be effective. The five days were divided according to the following schedule:

Day 1 (Mon)	Contact hour(s)	Topic
Session 1.0	1	Goals and objectives/course outline/autobiography (Chapter 1)
Session 2.0	1.5	What is design? What is knowledge? (Chapters 2 and 3)
Session 3.0	1.5	What is Alpha Knowledge? (Chapter 4) Introduction of Alpha Knowledge project (Chapter 5)

Day 2 (Tues)

Session 3.1	1	Review Alpha Knowledge project
Session 4.0	1	What is Beta Knowledge? (Chapter 6) Introduction of Beta Knowledge project (Chapter 7)
Session 4.1	6	Designing and building, testing and review of Beta Knowledge project

Day 3 (Wed)

Session 4.2	1	Testing and review of Beta Knowledge project
Session 5.0	1	What is Gamma Knowledge? (Chapter 8) Introduction of Gamma Knowledge project (Chapter 9)
Session 5.1	6	Designing of Gamma Knowledge project

Day 4 (Thu)

Session 5.2	1	Review of Gamma Knowledge project
Session 6.0	2	What is Delta Knowledge? (Chapter 10) Introduction of Delta Knowledge project (Chapter 11)
Session 6.1	5	Designing of Delta Knowledge project

Day 5 (Fri)

Session 6.2	1	Testing and review of Delta Knowledge project
Session 7.0	1	Learning and evaluation (Chapter 12)
Session 8.0 11:00/12:00	1	Summary (Chapter 13)

Observations and Results: The observations and results of the second workshop were similar to the first workshop. HRDI undertook a teaching evaluation by questionnaire, and other information for official records and statistics such as daily activity sheet and attendance sheet.

The less formal results came from observations and comments by the visiting expert, the resident professor, and the participants. The most important observations are:

?? The language challenge continued. The use of more visual information and projects alleviated some of the language issues in case study 1.

?? The use of teams proved to be equally effective in this round. The camaraderie explicit in teams was further reinforced by meeting outside of class, such as a dinner together at a local restaurant.

?? Lectures were generally shortened for case study 2. A greater amount of visual information was also provided. These two changes seem to keep the student participants more involved in the workshop.

?? Out of courtesy to the Korean students visual information that made a direct reference to Japan were eliminated from the presentations.

?? Because some of the exercises required additional hours after the class was dismissed it is recommended that the classroom remain open later.

?? Students were asked to review the textbook before each class, and to check the words and terms that will be used prior to each lecture because English proficiency for Korean students remains a challenge.

Conclusion

The visiting expert program clearly benefits the HRDI, the KUT, the student participants, and South Korean society. To better understand and situate some conclusions of the workshops the SWOT (strength/weakness/opportunities/threat) format was used. It provides a more structured form of analysis and permits a review that is more strategic than a mere list.

Strengths

?? Strong government support: The success of the visiting expert program is partially based on the strong support from the government. Without this commitment such programs would neither be successful nor exist.
?? Best source of expertise: Unlike some other national governments, the Korean government has not been reluctant to seek experts from outside.
?? Dissemination of acquired knowledge: Knowledge acquired by participants is disseminated to Korean students; it does not remain with the participants. This feature becomes a critically important facet of the program because the knowledge of one person quickly becomes the knowledge of many.
?? Small groups and one-on-one education: Visiting designers are often invited to give presentations to large groups. As effective as this direction may be it is not the same as the intimacy in one-on-one education. The latter may include fewer participants but provides longer-term benefits by eventually providing knowledge to many.
?? Understanding cultural differences in design: Many aspects of design theory, practice, management, and design education are perceived as western. However, many of these concepts have become global. Students must therefore be provided with sufficient time to have extensive discussions that include their perspective on each issue. A group of twelve students and two leaders provides the proper dynamics for such an activity.

Weaknesses

?? Language and translation: The challenge posed by visiting experts teaching in a Korean-language environment is not insurmountable but it does require special consideration for translation. The translator is the key to success.
?? Globalization of visual and design language: There is value to diversity and to distinctiveness as expressed through design. Inviting foreign experts to educate South Koreans in design and doing so according to western paradigms may prevent the emergence of a Korean design identity.
?? Stamina of the lecturer and translator for thirty-one consecutive hours of lecture: In its concentrated format the thirty-one-hour workshop requires a great deal of stamina from both the lecturer and translator in order to sustain consistency of performance in every class. Design exercises and/or projects need to be appropriately interspersed between lectures.

Opportunities

?? Small conferences or sessions with the visiting experts: HRDI might consider hosting small conferences or special sessions with the visiting experts in the days either before or after the lectures/workshops. These gatherings could provide an opportunity for HRDI to review its programs, e.g., discuss global issues in each of the disciplines.

?? Connection with out-of-school institutions: HRDI and KUT need to use foreign experts as a way of establishing more connections with other institutions and with industry. This could be achieved by way of seminars, lectures, or a half-day symposium for design staff in industry. These events would further enrich the quality of HRDI's programs.

Threats

?? HRDI programs require government support: The foreign-expert program exists because of government support, which is predicated, in part, on the general state of the Korean economy. A serious downturn in the economy might force an end to the program.

?? Limited time only at certain periods: The visiting expert program is offered during both winter and summer vacation period at a time when participants are available. This vacation period is four weeks in the summer and seven weeks in winter. However, these time periods also afford many other opportunities for the participants such as courses offered by other institutions. HRDI must, therefore, assure a strong sense of awareness and presence if it is to remain as a priority institution for these participants.