We are IntechOpen,
the world's leading publisher of
Open Access books
Built by scientists, for scientists

4,800
Open access books available

122,000
International authors and editors

135M
Downloads

154
Countries delivered to

Our authors are among the

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities

BOOK CITATION INDEX
CLARIVATE ANALYTICS
INDEXED

WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com

Professional Prerequisites for Japanese Sea Officers – Professional Training School Requirements –

Olivia C. Ogawa
Kinki University
Japan

1. Introduction

Traditional Japanese-style management, including life time employment and seniority systems has collapsed and instead, alternative achievement–oriented systems have been implemented. As a result, many Japanese people have come to believe that skills are required to secure job opportunities, thus they try to get licenced. However, some of them withdraw from professional training schools even before graduating, and rookie licenced professionals give up continuing their professional career paths, despite making technical improvements because the completion of work itself requires more than just acquiring techniques and licences. The purpose of this reseach is to explore the professional prerequisites for students who are launching careers as Japanese sea officers. In the following sections, previous literature relating to skills will be summarized, and previous research results and qualitative reserch data will be analyzed.

2. Literature

According to the literature about professionalism, professionals have two features, "specific knowledge" and "professional norms" (Macdonald, 1995; Wilensky, 1964). Members of the professional team are convinced that they should agree with their occupational norms and rules which serve as guidelines for the assignment of meaning in their actions. Such norms are described in their cultural contexts, focusing on the consistency rather than the originality of the individuals in the group, even though ideologies are not consistent with one another. These norms justify and explain the behaviors of the group members (Trice and Bayer, 1993).

On the other hand, it is accepted that each individual has his/her own unique ideology and stance in the career-based occupational realization (Katz, 1955; Ogawa, 2001, 2008, 2009).

Ogawa (2001) investigated the professionalism of Japanese sea officers and discovered that it contained two important aspects: knowledge and professional spirit integrating knowledge (intensive work). In this paper, professional spirit is the ideology that explains the reasons why Japanese sea officers work in a profession which contributes to the society.

Katz (1955) describes the skills for administrators, which can be referred to as professional skills. Katz (1955) suggests three basic developmental skills on which effective administration rests. It assumes that a successful administrator is required to obtain technical, human (interpersonal), and conceptual skills.

Technical skill implies an understanding of, and proficiency in, a specific kind of activity, particularly one involving methods, processes, procedures, or techniques. It is evident in many occupations such as surgery, engineering, accounting when each is performing its own specialized knowledge, analytical ability within that speciality, and the use of the tools and techniques of the specific discipline. Technical skill is the most familiar of the skills because it is concrete and required of the greatest number of people. For this reason, our vocational training and on-the-job training programs are largely concerned with developing this skill.

Human skill is a vital part of everything the business person does. This is the ability to work effectively as a group member and to build cooperative effort within a team. It is primarily concerned with working with people. The person with highly developed human skill is aware of his own attitudes, assumptions, and beliefs about other individuals and groups. In accepting the different viewpoints, perceptions and beliefs of others, the person must be skilful in understanding what the others really mean by their words and behaviors, and in communicating to others in their own contexts, what the person means by his/her behavior. In addition, the person can work to create an atmosphere of approval and security in which subordinates feel free to express themselves without fear of censure or ridicule, by encouraging them to take part in the planning and executing of things. The person must be sensitive to the needs and motivations of others. It must become a natural, continuous, unconscious activity, since it involves sensitivity not only in on-the-spot decision making but also in the day-by-day behavior of the individual.

Conceptual skill, as used in the context of this research, involves the ability to see things in one's career as a whole and to choose what one wants to be. It includes recognizing how various functions of the organizations, occupations, and stakeholders depend on each other, and how changes in any one part, affect all the others. It extends to visualizing the relationship of the individual to the industry, the community, and the political, social and economic forces of the nation as a whole. Therefore, the success of any decision depends on the conceptual skill of the people who make that decision and those who put it into action. Not only does the effective coordination of the various parts depend on the conceptual skill of the people involved, but also on the whole future direction and tone of the profession and organization. The attitudes of professionals with conceptual skills color the whole character of the occupational response and determine '(occupational) personality' which distinguishes one occupational practice. These attitudes are a reflection of professional conceptual skill- the way the professional perceives and responds to business growth, occupational objectives and policies, and stakeholders' and students' interests. To whit, conceptual inadequacy leaves professionals at a serious disadvantage.

This research supports Katz (1955) and Ogawa (2001), because it is natural that an individual has his/her own recognition of a profession and its functions to the society, even though professionals share their occupational culture. One can create ideological significance to launch his/her own professional career.

According to Ogawa (2009), knowledge and professional spirit as discussed in Ogawa (2001), are equivalent to technical skill and conceptual skill in Katz (1955). Although human skill

(Katz, 1955) is not mentioned as a characteristic of professionalism in Ogawa (2001), it is recognized as a culturally embedded professional behavior. In this research, it is taken for granted that human skill is a required element in professional relationships.

In the following sections, professional training school prerequisites for students who want to become Japanese sea officers will be analyzed, from the viewpoint of three skills (technical, human and conceptual skills) in Katz (1955). This research will closely discuss the conceptual aspects of professionals, for the purpose of exploring what is more important than acquiring techniques or licences for professional careers.

3. Method

3.1 Measure

Semi-structured interviews and participation observations were conducted between 1998 and 2008.

This research was conducted with students and teachers in professional training schools in Japan. They were chosen to examine a variety of skills influenced by the inferential factors such as occupational characteristics (living and working together 24/7) and school systems (classes and practices).

The purpose of the interviews was to explore all dimension of skills by examining the participants' responses to open-ended questions about learning, lectures and practices since they entered the university. Counseling style interviews were conducted in an effort to build a rapport with the participants, and to have them share their true thoughts and feelings about various issues. Responses to open-ended questions provided qualitative data for analysis. Questions were constructed on the basis of Professionalism literature emphasizing the events of realizing the importance of knowledge, working spirit, and relationships (e.g. Katz, 1955, Ogawa, 2001).

Face-to-face interviews were conducted for approximately forty to sixty minutes, the longest being two hours. All interviews were recorded and transcribed in Japanese, and all the data that has been used in this paper was translated from Japanese to English.

In addition, situation-oriented data was gathered by observation at sea. The researcher was onboard, and remained at the bridge of the ship depending on the students' shifts.

3.2 Respondents and organizations

The number of participants who were interviewed was 60 (55 students and 5 teachers). Students were studying a special course in maritime science at a Japanese national university and on the training ship owned by the National Institute for Sea Training (NIST). These research projects have been conducted since 1998, and some of the respondents have participated in more than one of our projects.

The professional training schools in which this research was conducted, covered the majority of maritime sciences including the government accredited training course for professional ship officers and engineers.

Japanese students attend the maritime academy post-secondary school rather than the post-tertiary schools which is different from the Western system.

The school environment simulated the intended future working situations. It recommended that students, especially those wishing to become sea officers, live at the dormitory adjacent to the campus or the apartments near the campus, even though students preferred to live at

home with their families for personal reasons. Students had to attend practical ship training provided for one month, 24 hours a day by NIST. They attended this training until their third year, and for three months at the end of their senior year. They needed to complete one year of practical training (6 months during university and 6 months in NIST after graduation) before acquiring the license of Third officers. Therefore, students ended up living together throughout their schooldays.

Most of the teachers and students were well acquainted, saying hello whenever they met one another, remembering each other's names easily. Teachers and senior students taught younger students how to communicate with each other, and how to maintain discipline. Small-sized classes facilitated more effective communication. The school enrollment was limited to 90 students for professional training in each grade.

Students were encouraged to study harder by teachers and friends, taking up many core courses as well as preparing for the national examinations to get licenses. Some students were able to pass the paper-based examinations during their schooldays despite the fact that the licenses could be obtained during their practical career after graduation.

3.3 Procedure

This research has initially highlighted the professionalism of sea officers (Ogawa 1999, 2001), from Katz (1955). However, some of the dimensions (human and conceptual skills) in Katz (1955) were explained by analyzing the interview data after 2005, because the interview guidelines after 2005 were reconstructed based on previous research projects and therefore more detailed information was obtained.

Educational systems, unique cultural conventions and students' needs were targeted in order to analyze prerequisites for Japanese sea officers. Data referring to thoughts and feelings were analyzed from a psychological viewpoint in order to interpret the background or underlying reasons for students' behavior.

Also evident, as shown by the interviewees' responses in this paper, is the state of confusion created by thought provoking interview questions that required interviewees to engage in self analysis and reflection throughout the interviews. Hence, the responses may appear to be ambiguous. However, this provides a true image of the interview situation.

4. Results

4.1 Technical skills

Ogawa (1999) summarized the educational programs for students in the professional training school (Fig.1). Classroom lectures and practical trainings are included. Theory and basic disciplines, which are considered to be the basic guidelines for acquiring technical skills, are learned mainly in the classroom. Students can put the knowledge into practice and learn more practical technical skills including procedures, techniques and methods in specific maritime situations.

In this research, businesses and professional organizations have paid great attention in developing technical skills of students throughout their four years of university because the industry requires work-ready graduates. However, Ogawa (1999) found that technical skills learned in the professional training school only covered basic patterns which could be applied in industrial situations after graduating from university. Sea officers had to continue to learn, and to acquire many more technical skills after entering shipping companies.
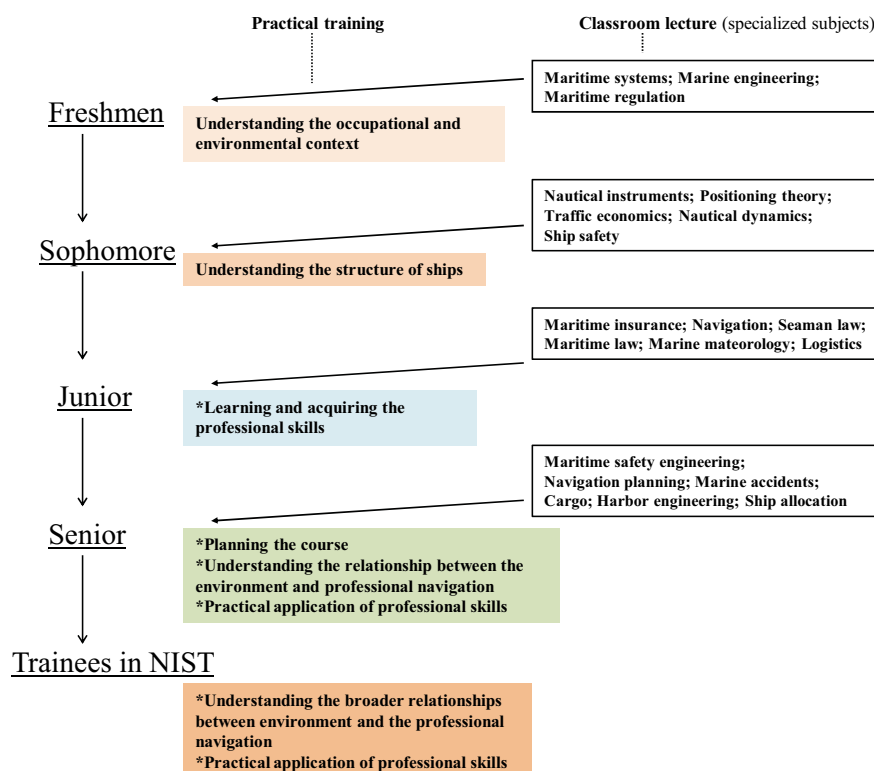
Practical training   **Classroom lecture** (specialized subjects)

<u>Freshmen</u>

| Maritime systems; Marine engineering; Maritime regulation |

Understanding the occupational and environmental context

<u>Sophomore</u>

| Nautical instruments; Positioning theory; Traffic economics; Nautical dynamics; Ship safety |

Understanding the structure of ships

<u>Junior</u>

| Maritime insurance; Navigation; Seaman law; Maritime law; Marine mateorology; Logistics |

*Learning and acquiring the professional skills

<u>Senior</u>

| Maritime safety engineering; Navigation planning; Marine accidents; Cargo; Harbor engineering; Ship allocation |

***Planning the course
*Understanding the relationship between the environment and professional navigation
*Practical application of professional skills**

<u>Trainees in NIST</u>

***Understanding the broader relationships between environment and the professional navigation
*Practical application of professional skills**

Fig. 1. Academic Transition between Practical Trainings and Classroom Lectures
(Courses for Navigators) (Ogawa, 1999) (Translated from Japanese)

4.2 Human Skills

According to Ogawa (2008), human skills in the professional training school are strongly connected to those used by the team at sea and in business groups on the land[1] to create trust within the team. Based on the participation observations that started in 1999, a top-down order system is evident in industry and school. Higher-ranked officers make decisions and give orders to other members. Subordinates are required to follow their superiors' orders. Furthermore, subordinates are required to report the tasks' completion once they have been assigned to them. Senior students strive to teach the top-down system to freshmen during their initial phase in the university.

Moreover, senior students teach freshmen how to communicate and get along with higher-ranked people, and with peers. They are together 24/7 during practical training, and cannot leave the ship once they board the ship. For example, they are in close quarters when doing many activities together including meals and drinking parties. Students are learning these kinds of highly developed human skills as mentioned in Katz (1955), by living together in the dormitory and the training ship. They tend to accept different viewpoints and beliefs of other students and members, and tend to recognize messages and behaviors of others.

---

[1] Japanese sea officers are moved off to another section on the land, and go back to the sea every several years.

Teachers interact enthusiastically with students and they try to remember each person's name. In addition, students appear to trust teachers and students because they express their real feelings including problems and individual matters.

> We are strongly connected in this school. Everyone knows each other like family. Not in public, but somewhere in a private group…off course, it might give both merits and demerits. Anyway, we rely on each other. I have never had such a connection to friends and teachers in high school. I can speak about my personal issues to my friends or teachers here. (student 1, 2005 spring)

Student 1 indicates that there is a valuable communication and a strong connection between teachers and students that make them feel relaxed and trust each other; rapport is built between the members.

Human skills as mentioned in Katz (1955) are developed at the beginning of university, in parallel with their traditional top-down communication system in the workplace. However, human skills are not taught formally. Teachers and students develop human skills through daily communication.

4.3 Conceptual skills

4.3.1 Conceptual skills of Japanese sea officers and students

The conceptual skills of many respondents in this research have been developed through **the realization of their responsibilites and beliefs**, that by carrying products and natural resources, they are supporting Japanese people's living. From the result in Ogawa (2001), many maritime students and teachers on the training ship showed a strong compassion to others and sometimes sacrificed themselves to support others. They had the strengths to overcome the rigidity of the maritime environment and training. On the other hand, Fujiwara (2005/2006) mentions that 'the Samurai spirit' incorporates charity, sincerity, endurance, justice, courage, and compassionate empathy [2]. This Samurai spirit has functioned as the traditional criteria for actions and morality of many Japanese people since the Samurai emerged. Ogawa (2009) says that ''Seamen's spirit'' as called, is considered to have originated from ''the Japanese Samurai spirit''.

One student recounted her experience of building the concept as a freshman,

> I could often feel the professional spirit, that was seamen's spirit, when I was staying with upper levelled officers in the training ships. I hadn't had any friend involved in the maritime society before I entered this university, so it was the unknown world. When I went to the practical training in the ship which was operated by NIST, it was the first time for me to take one-month practical training. During the training, I talked with the teacher who was temporally sent from the Japanese shipping company. He talked me that the sea officers had to work at the risk of their lives. They put their lives in danger! I don't deny that the usual works on the land are at risk, but it is not compared to the workplace on the sea. I had never realized that I was bound by myth of safety. On the other hand, sea

---

[2] Fujiwara (2005/2006) agreed with the interpretation by Nitobe (1899/1998), which introduced ''Bushido'' to outside of Japan.

officers always make their living at a risk for almost whole year! It was no less than astounding and beyond all imagination. He had operated the oil tanker conducted by a Japanese shipping company, so he was vividly aware of responsibility that he and his colleagues carried oil and supported livings for Japanese people. He said that he delivered their happiness, had to eliminate unhappiness such as death which happened in the ship. He mentioned, 'we delivers happiness from which variety goods are made. Someone presents one of them to his girlfriend. On the other hand, someone are waiting for and wishing to give the significant other the goods which we carried from abroad. ' When I listened to his story, I was surprised to his strong concept toward the work and the difference between his recognition and ours at that times. I had thought as a layman that sea officers were only the people who carried the stuffs before I talked with him. I understood that the people like truck drivers also deliver goods, but I was strongly impressed his concept to work as a sea officer who carries across the sea. I was overwhelmed by his tremendous pride and policy as a professional, at the same time I realized that I was tiny and powerless. I was greatly influenced by him because it was the first time, during the practical training in freshman, to see the person with such highly-developed concept to the occupation. [snip] I was deeply influenced by the worldview of the sea officers who was on loan to the educational deck. So would my friends be. It was rare to meet such a kind of officers from companies. I had not had a strong desire to become a sea officer before I met him, but I started to have a strong notion that I wanted to be a sea officer. Now I positively participate in the training in order to absorb everything. (student 2, 2003 spring)

On the other hand, student 4 said that the sea officer's career is built upon the accumulation of worries, which are related to her desire and interests.

To get a job as a navigation officer means I'll do what I want to do. That's really what I want. It came about after thinking it over and over again. (student 4, 2008 summer)

Conceptual skill of student 4 here could offer the direction of how to be a sea officer. Student 2 has an understanding of the responsibility and beliefs. This demonstrates that the conceptual skill here is defferent from each individual.

4.3.2 Factors developing conceptual skills
According to figure 1[3], the educational program in this training school includes both classroom lectures and practical training. **The practical training** introduces the things inside and around the ship, and assists young students to understand the maritime environmental context, and to give an image of the ideal future workplace and career. As already shown, student 2 talked about her experience that happened during the practical training.
In addition, student 4 discussed that her practical training in her freshman year has encouraged her to create her own conceptual skill that she wanted to be a sea officer. She did not feel as much physical and psychological difficulties as other students, although she went through many difficult situations in the practical environment. Moreover, she was able

---

[3] The relating parts were highlighted in Figure 1.

to build confidence to launch her career and to take actions by her own decision in the maritime environment.

> I can't do well and easily get intimidated even on a part-time job. I felt confident, however, when I was on board Taisei-maru. I felt the operation was good. I had thought before that it would be just for fun. But now I want to do everything on board a ship. When I had to choose the seminar, I made up my mind for taking it by myself. Although other people talked to each other so that they can be enrolled in the same seminar with their friends. I was kind of independent, thinking like "I really want to study in this seminar, so I sign up for it even if the others don't. I was supposed to take part in this training with a friend of mine. She eventually cancelled but I didn't. It had seemed interesting so I thought I would join alone. I could feel I would do it alone. Isn't it uncomfortable to be alone? I don't know, though. But I could do it. In the former training ship, the other people I signed up with didn't seem to like boarding the ship. They did things sloppily. I liked boarding the ship and wanted to do things right. I got annoyed when I saw someone doing exercises with disoriented attitude in the workout period. I wanted to tell them to do things right. Being with people like them, I thought I should do everything right. I didn't feel sick in Taisei-maru while others did. I think I'm suited to boarding the ship. I could do many things during the practical training. (student 4, 2008 summer)

As a result, doing practical training from an early stage at the university helps students visualize the ideal future workplace. This means that students can acquire conceptual skills by being in a real situation at sea.

The data of student 2 also shows that conceptual skill was deeply influenced by the input and skills of **guiding figures**. Student 2 began creating her own conceptual skill, which was influenced by the story relating to the conceptual skill of the sea officer from a company.

On the other hand, the data of student 4 below revealed one aspect of the skills of guiding figure. She reconstructed the future direction of her career by talking about her career problems with guiding figures. Student 4 considered who to share her opinions with. In addition, student 4 chose the guiding figure depending on the types of issues and career stages.

> When preparing for an interview, I didn't tell my teachers everything in my mind. I wondered if I should tell them things like my future or family. Actually, I've been talking with one of my fellow students about it. She aims at becoming a navigation officer like I do and also wants to get married. We're in the same position. I asked her for some advice. Besides her, I talked about my worries and problems to some other students when I thought they could understand them. To my teachers, I talked a lot about other matters. They taught me various things and encouraged me to keep trying. But I couldn't tell them all. (student 4, 2008 summer)

The student 4 also indicated in the above data that professionals, including teachers and her peers could be guiding figures. Seniors are more suitable to be role models.

4.3.3 Update conceptual skills at the career stages

This research obtained longitudinal data from student 4, starting from the early stage at the university. Student 4 participated in some of the research projects, giving stories about her conceptual skills in her freshman and senior years. According to the analysis, she **validated the core conceptual skills** which were acquired in her freshman year, and she **updated them incrementally** when she struggled with problems and realized important things in her career.

As already shown, when student 4 was a freshman, she shared that being a sea officer was what she really wanted to be, because she could gain confidence and could make independent decisions. Through practical training, she realized that she could handle difficult situation in maritime environment.

Two and a half years later, she reflected on her experiences at the training school in the last three years.

In her freshman year, student 4 wanted to be a teaching officer at the national training school. When she became a sophomore, she participated in the internship program there. Desk work was assigned to her, and realized that job at sea was more appealing than the tedious work provided at the national training school.

> I had a great time training on the ship as a freshman. I got fond of the operation at the navigation training school. I wanted to be an officer at the school. It has been my dream since I was a freshman. Everytime the training ship called on port in Kobe, I went to chat with crews. I asked them if they enjoyed their work or how I could enter the school. I became friends with many of them. Some of them took me out for dinner. Since I felt linked with them after listening to their stories, I got motivated to enter the training school.
> In my sophomore year, I chose to do an internship at the training school. They let me do various on shore duties there. But honestly, those duties were boring because all I did was to sort and file documents. The work at the training ship was more interesting. Ground works were a little boring. (student 4, 2008 summer)

In her junior year, student 4 started job-hunting, and thought more deeply about her career as a sea officer than before. She has met a teaching officer in the practical training. It was difficult for this officer to develop both teaching and maritime skills. Due to this, student 4 has started to wonder about her own future as well. This resulted in a change of interest in becoming a teacher in the training shool. She eventually decided to operate ships and develop skills as a sea officer in a shipping company.

> In the training for juniors, I saw a young officer whose skill was as poor as ours. In fact, we students were better at doing the difficult skill of cross-bearing. This officer was often scolded. I knew this officer really worked very hard even when exhausted. But I became aware of the situation where young officers like this officer can't get enough on-the–job training on board because senior officers are tied up with training students. As a result, the young officers in training can't get a chance to brush up their skills without being coached by their superiors who mainly watch and take care of students. I know we should make efforts on our own, but we need coaching to build up the experience. I thought it might be hard to acquire enough skills as a navigator if I get a job as an officer in the

training school. I'm not a competent person. I have worry about what it would be like to work with students in the training school. This image affects my thinking. It made me think I would work for a shipping company to get adequate skills and then I'd go back to the training school if I still wish. I can't take care of students as a senior when my skills are not good enough. It might be better to enter the shipping company for brushing up my skills. It was at the training session in October and November in my junior that I came up with the idea that I should be an officer for a company and not for the training school. (student 4, 2008 summer)

In addition to that, student 4 was struggling during the job-hunting stage because she had some doubts about launching her maritime career, which is related to her gender and family.

When I started job-hunting and took it seriously, I heard some rumors about the school. Since I have wanted to become a navigation officer, I took various tests. I passed the written test for the 1st level. I got all levels of the license to be a wireless operator. I took the liberty to get the license for handling the navigation hazards. I've got enough licenses and have worked hard. I thought it was worthwhile applying for shipping companies including major ones, which were said to be difficult to pass. I wanted to have a baby, as well as to work on board a ship. The shipping companies offer the wide range of on-shore duty. Only 4 or 5 years have passed since they began recruiting female officers. So, I thought I could create a system suitable for female officers. It would be interesting to challenge on things in the new environment under which we have no established systems for female sea officers. This is one of the main reasons why I decided to be an officer for a shipping company. The event which gave me the greatest push was the "Career café". It was a group for working women. In my junior year, I attended it and talked with two people, one is a researcher studying female sea officers in Cardiff, UK, and the other one is a female officer who will soon be a second mate. I thought she was cool. Around the same time, I was inclined to get a job for on-shore duty. I was wondering which job to apply for. The conversation with these women gave me a great motivation. The researcher said, "You should list up what you can't decide to do and link them together like a grape vine to identify what the problems are. Put down the benefits for being a sea officer. Why don't you try something that you think is the most suitable for you." When I got home, I did what I was advised to do. In the end, I realized I really wanted to be a sea officer. I thought I shouldn't worry too much about my current problems or that, I should tackle them. It could be that I'd rather do on-shore duty just because I don't want to be separated from my loved one. But I knew it wasn't the right decision. I didn't want to sacrifice what I really want to do. I thought I would break up with him if he didn't understand me. I know he saw me make the effort to get the job I wanted. I told him my idea and he agreed with me. I thought working on the ship would suit me better. I thought I would quit the job if I got on-shore duty against my will. Besides, many people encouraged me to work on board a ship. That's how I decided to be a sea officer.

I got confused. I cried over the phone. I couldn't decide which way to go. I just let it all out to him. I couldn't say what I really wanted to do when he asked me. I didn't want him to decide, either. I knew I had to decide by myself, but I couldn't right away. That was when I got a chance to talk with the female sea officer and the researcher. They made me think I

should listen to my heart and do whatever it says. Even if I fail, I can bounce back myself and wait until I find a new way. (student 4, 2008 summer)

She talked with her guiding figures (sea officers, peers, teaching officers, and working women) several times, summarizing her problems and opinions on a sheet of paper. At the end, she decided to go to a more challenging stage which is considered to be very difficult by other student and teachers, and passed the most dificult national examination. In addition, she believed that the guiding figures prayed for her success to overcome hardships and to develop both technical and conceptual skills. This shows that the concept of developing skills and taking on challenges are more inevitable in her career and life.

Focusing on the transition in data by student 4, conceptual skills could be updated at some important events throughout the training and contacts with guiding figures. In addition, conceptual skills had **motivated students to acquire technical knowledge and human skills** everytime they were validated and updated. Student 2, as mentioned earlier, began creating her own conceptual skills and career image which was deeply influenced by the story related to the conceptual skill of the sea officer from a company. As a result, she also became more motivated to develop other skills. Therefore, conceptual skills could be the reasons why professionals integrate a variety of technical and human skills.

On the other hand, student 3 mentioned that he did not have a concept of what a career is, even though he participated in the practical training. He shared that he felt that he had to obey the authority and that did not develop an understanding of the responsibility to the occupation and society.

I didn't feel the seaman spirit still now, because I am a trainee and ordered and supported by more responsible officers. I have never taken practical training to abroad. But after launching as a sea officer or in tall ship training, we could feel special feeling like the professional spirit. I think that the upper levelled officers, such as captain and chief officer in the ministry of transport, could image such kind of concept to the work. (student 3, 2003 spring)

The excerpt above indicates that sea officers and students need time to build and update their conceptual skills.

The interviews in this section highlighted some important findings. First, conceptual skills in the society of sea officers could be related to the understanding of responsibility and beliefs for Japanese people's living, which originated from Japanese people's traditional aspects. Second, conceptual skills, learned from an early stage at the university, were important for students to choose the maritime career. Third, conceptual skills are built not only in the practical environment, but also by the influence and skills of guiding figures. Fourth, students validate and update their conceptual skills at the developmental stages of their maritime career. Fifth, students become strongly motivated to incorporate technical and human skills when they begin to understand and renew conceptual skills. Finally, it requires more time to obtain conceptual skills. Students could not always acquire conceptual skills from practical training and contacts with sea officers because more time was needed to do so.

5. Discussion

This research investigated professional prerequisites for students wishing to become sea officers from the viewpoint of Katz. Previous researches about sea officers' knowledge (Ogawa, 1999, 2001) and additional qualitative data drawn from the interviews and observations demonstrated each dimension of skills in Katz (1955).

Professional training school teaches technical knowledge to students both through classroom lectures and practical training from their freshmen year. At the beginning of university, the emphasis is in the acquisition of theories and disciplines. Methods, processes, procedures, and techniques, which Katz (1955) pointed out in the definition of technical skills are taught mainly in the junior and senior years. In addition, technical skills acquired in professional training school are only basic patterns for use in limited situations. However, much more complex technical skills are acquired through experiences in business. Moreover, human skills strongly related to the working environment and the building of conceptual skills are fundamental to the accumulation of technical knowledge.

Conceptual skills are strongly based on career stages and various events. Consistent with qualitative research data about students and teachers for Japanese sea officers indicated that they developed conceptual skills throughout their training. Introductory conceptual skills were far more important for students to make the initial decision in launching their maritime career, and to assimilate into the practical Japanese workplace, despite the fact that many Japanese people including some maritime students, concentrate on the basic technical skills for obtaining a license. Therefore, the building of conceptual skills is fundamental from an early stage at university. Practical training and the influence and skills of guiding figures are factors required for understanding the importance of conceptual skills. However, more time is required to acquire conceptual skills because students or younger sea officers need to update their conceptual skills, integrating the ongoing updates with their core values.

In order for students to continue their professional career paths and develop their skills, the updating of conceptual skills are far more important at every developmental stage. People around them such as teachers or administrators, should not become obsessed with the idea that making a decision for students to launch their maritime career or obtaining the licences, is not the end of their voyage.

Figure 2 summarizes the relationship between developmental stages and prerequisites from the Katz's point of view.
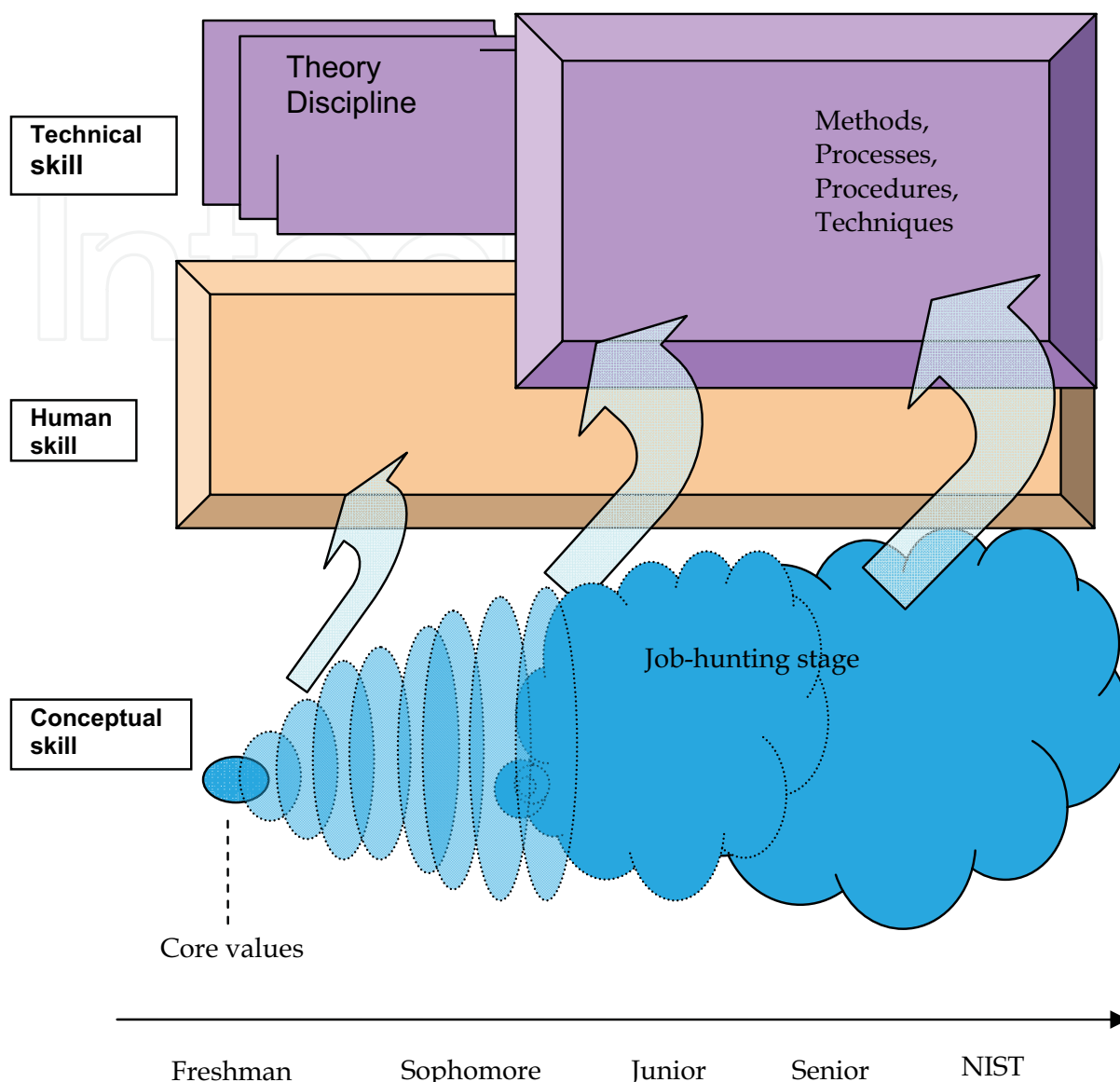
Fig. 2. Prerequisites for Japanese Sea Officers[4]

6. Conclusion

This research demonstrated the professional prerequisites for Japanese Sea Officers from the viewpoint of Katz literature. Consistent with Katz (1955), conceptual, human, and technical skills were revealed from the analysis of qualitative research data. Introductory conceptual skills at the early stage and updating them constantly are far more important for the students to assimilate into the practical careers of Japanese sea officers, despite the fact that most Japanese people try to focus more on technical skills to obtain a license. The teachers

---

[4] Figure 2 in this paper was updated from the figure 2 in Ogawa (2008).

and administrators in the professonal training organizations should realize that younger professionals need both time and skilful guiding figures to develop their conceptual skills in order to continue their career as sea officers.

7. References

Fujiwara, M. (2007). *The Dignity of the Nation* (G, Murray, Trans.), Tokyo, Japan, IBC publishing. (Original work published 2005)

Glaser, B.G. & Strauss, A.L. (1967). The discovery of grounded theory: strategies for qualitative research, New York. Aldine Pub. Co..

Goode, W. J. (1960). The Profession, Reports and Opinion, *American Sociological Review*, vol.25, pp.902-914.

Greenwood, E. (1957). Attributes of a Profession, *Social Work*, vol.2, No.3, pp.45-55.

Katz, R.L. (1955). Skills of an Effective Administrator, *Harvard Business Review*, January-February, pp.33-42.

Krumboltz, J.D. & Levin, A.S. (2004). *Luck is no Accident*. Atascandero, CA. Impact Publishers.

Macdonald, K. M. (1995). *The Sociology of Professions*, Sage Publications.

Nitobe, I. (1998). *Bushido: The soul of Japan* (T, Suchi, Trans.), Philadelphia, The Leeds and Bible. (Original work published 1900)

Ogawa, C. (1999). Professional skills in the training school -comparing school and business- (in Japanese), *Monograph series* #9909, 108 pages, Kobe University.

Ogawa, C. (2001). Professionalism of Japanese Sea officers in Japanese Shipping Companies.-The Link between School and Industry- (in Japanese), Unpublished doctoral dissertation, Kobe University, Kobe, Japan.

Ogawa, C. (2006). The Career Development of Young Japanese People: The Attainment of Self-confidence in career development, *proceedings of the 46th Congress of the European Regional Science Association,* August 30-September 3, 2006. Volos, Greece.

Ogawa, C. (2008). Professional Training School Prerequisites for Students Wishing to Become Sea Officer, *proceedings of International Technology, Education and Development Conference,* March 3-5, 2008. Valencia, Spain.

Ogawa, C. (2009). The Career-Based Conceptual Skills for Students Wishing to Become Japanese Sea Officers, *Proceedings of the Mediterranean Conference for Academic Disciplines,* February 23-26, 2009. Gozo, Malta.

Schein, E. H. (1972). *Professional Education, Some New Directions*, Mc Graw-hill, New York.

Schein, E. H. (1984). Coming to a New Awareness of Organizational Culture, *Sloan Management Review*, vol.25, pp.3-16.

Schein, E.H. (2006). *The Career Anchors (3rd edition)*. San Francisco, CA. Pfeiffer & Co.

Trice, H. & Beyer, J. (1993). *The Cultures of Work Organizations*, Prentice-Hall.

Wilensky, H. L., (1964). The Professionalization of Everyone?, *The American Journal of Sociology*, vol.70, pp.137-158.

Advances in Technology, Education and Development

Edited by Wim Kouwenhoven

From 3rd to 5th March 2008 the International Association of Technology, Education and Development organised its International Technology, Education and Development Conference in Valencia, Spain. Over a hundred papers were presented by participants from a great variety of countries. Summarising, this book provides a kaleidoscopic view of work that is done, all over the world in (higher) education, characterised by the key words 'Education" and 'Development'. I wish the reader an enlightening experience.

How to reference

In order to correctly reference this scholarly work, feel free to copy and paste the following:

Olivia C. Ogawa (2009). Professional Prerequisites for Japanese Sea Officers — Professional Training School Requirements —, Advances in Technology, Education and Development, Wim Kouwenhoven (Ed.), ISBN: 978-953-307-011-7, InTech, Available from: http://www.intechopen.com/books/advances-in-technology-education-and-development/professional-prerequisites-for-japanese-sea-officers-professional-training-school-requirements-

INTECH
open science | open minds