



# Study on the Actual Condition of Domestic and Foreign Survival Swimming Programs

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## Abstract

**Purpose:** The purpose of this study is to provide basic data for developing an educational program that can be practically applied in the field of survival swimming education. **Research design, data, and methodology:** This study reviewed prior literature including governmental reports, journal articles related to survival swimming programs at home and abroad. Based on the basic data collected through literature, domestic and foreign educational institutions and national educational programs were cataloged and analyzed. **Results:** The study found that among the goals of swimming education, the prevention of water accidents and the cultivation of water safety skills along with improving swimming ability are very important educational goals. Currently, domestic survival swimming education programs are divided into classes and training sessions, so it is necessary to develop an educational program according to each individual's swimming ability and a unified and systematic program through education for each level of survival swimming learners. **Conclusions:** It is thought that the reinforcement of the leader's capacity for quality improvement will have a positive effect for the development of survival swimming. Further implications were discussed.

**Keywords:** Survival Swimming, Water Survival, Swimming Education, Swimming Program

**JEL Classification Code:** I10, I12, I18

## 1. Introduction

In Korea, rivers and three sides, including valleys and four major rivers (Han River, Geum River, Nakdong River, and Yeongsan River), are surrounded by the sea, however water-safety activities including drowning prevention were not sufficient (Korean Lifesaving Association, 2022). As a result of analyzing the safety accidents that occurred in coastal waters over the past eight years, the Korea Coast Guard (2002) found that they occurred intensively during the summer vacation season, July to September. When looking at the status of child safety accidents, the number of drowning was decreased continuously 2,375 in 1994, 1,649 in 2000, 638 in 2010, 470 in 2019, these figures shows death of drowning per 100,000 capita was changed from 3.5 in 1994 to 0.9 in 2019. In spite of these stats, drowning is still the second leading cause of death after traffic accidents. Moreover, the Ministry of Public Administration and Security and related ministries such as the Ministry of Education jointly established the '1st Basic Plan for National Safety Education' in order to prevent safety accidents and improve people's ability to respond to disaster situations. was first introduced, starting with 60,000 students in the 3rd grade of elementary school nationwide, 190,000 in 2015, 350,000 in 2016, 810,000 in 2017, and expanded from 3rd to 6th grade in 2018, increasing to 1.04 million It was reported that it will be implemented for all grades of elementary school in 2020.

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Among the ultimate goals of swimming education, it is emphasized as an education for survival rather than improving the ability to prevent and cope with water accidents and improve swimming skills through swimming strokes (Kang, 2021). As the ability to cope with and prevent accidents was improved and the safety area was newly reflected as an area of the physical education curriculum, the mandatory water safety education became clear (Kim, 2021; Lee & Kim, 2019).

In the case of survival swimming abroad, in the UK, swimming and water safety education has been made compulsory as a legal element in the curriculum since 1994, and swimming education is being conducted through schools. German swimming education does not focus on detailed skills such as speed or shape of swimming, but rather aims to ensure that students can independently move safely in the water and protect their lives. In the case of Japan, which is close to Korea, they suffered similar pains to Korea and based on that pain, they built swimming education based on various foundations, and they view swimming as a means of survival rather than leisure. In Japan, water safety education became compulsory after the Shionmaru incident, and more systematic water safety education than Korea, such as swimming in clothes, is being implemented. In France, education is consistently provided for 30-40 minutes per week in elementary school, 30-50 minutes once or twice a week in middle school, and 30-60 minutes in high school.

Research on survival swimming education in Korea has been actively conducted since 2015, but many of the previous studies have pointed out that the educational aspect is insufficient. Travel time and preparation time to the swimming pool consigned to the school are included in the training time, so the training time restrictions and the advantages and disadvantages of swimming education for the consignment swimming instructors are more important than professional qualifications (Kim, Kim, Seok, & Choi, 2017). There was an opinion that a sense of mission was lacking (Kim & Lim, 2021). As the country has urgently implemented survival swimming education, research results suggest that the survival swimming curriculum presents various problems depending on the leader's competency and the educational facility environment. Some education offices, such as Seoul, Gyeonggi-do, and Gyeongsangnam-do, developed and distributed educational materials on their own so that schools could selectively educate them. is in progress Most of the survival swimming education is conducted by the leader of the entrusted institution, and the entrusted institution has a great influence on the education of the education according to the educational environment such as facilities, manpower, and training time.

## **2. Method**

In order to investigate the actual conditions of survival swimming programs, this study collected and analyzed data related to survival swimming at home and abroad using the literature research method. The data collected in this study are divided into primary and secondary literature data.

The keywords 'survival swimming', 'water survival', and 'swimming education' were searched for in Internet materials from the 'Korea Education and Research Information Service (RISS)' and other in order to obtain degree thesis, academic data, and books related to survival swimming at home and abroad. In this process, primary data were collected on the Korean Ministry of Education's elementary school swimming instruction manual, Seoul Metropolitan Office of Education survival swimming program, Gyeonggi-do Office of Education survival swimming program, Gyeongsangbuk-do infant survival swimming program, Ministry of Oceans and Fisheries survival swimming program, overseas British Royal Life Rescue Association, American Red Cross swimming education, and water experts association, survival swimming education in France, survival swimming education in Japan, and survival swimming education in Germany. Secondary literature data were additionally collected from overseas press releases related to children's swimming and the websites of swimming associations and similar institutions to re-view various cases of swimming education programs related to survival swimming. Finally, based on the collected basic data, domestic and foreign educational institutions and educational programs by country were cataloged and the contents analyzed.

## **3. Results**

### **3.1 Domestic survival swimming education analysis**

The main goal of elementary school swimming education in Korea is to develop the ability to prevent and cope with water safety accidents by repeating and mastering water safety awareness and habits through swimming education. In addition, it is necessary to learn swimming skills and cultivate a challenging spirit, but prior to that, it is to prevent water safety accidents and to cultivate the ability to cope with various water safety accidents.

As for the contents of swimming education, while focusing on nurturing survival swimming ability, it is possible to develop confidence and challenging spirit in the water by learning swimming skills together. It is divided into

three categories: survival function, swimming function, and rescue function. The survival function refers to a function to protect one's own life, the swimming function refers to a function to improve an individual's swimming ability, and the rescue function refers to a function to help others during water activities. Domestic swimming education is largely set up in three stages, 1st and 2nd graders focus on water adaptation activities and water play education, 3rd and 4th graders learn the basics of survival, swimming, and rescue skills, and 5~ In 6th grade, it is structured to study advanced contents.

The goal of swimming education is to learn the basics of lifesaving experience and survival and to develop a confident attitude toward water leisure activities by experiencing the achievement of individual goals and active challenges through repeated mastery to cope with water accidents. Domestic survival swimming education includes contents that provide various survival swimming education opportunities, but the main content is experience-oriented education as education is conducted in an indoor swimming pool rather than actual education in an environment such as a river, sea, or valley. In addition, the difficulty level is not set according to each learner's ability, and the education is conducted by class, so that the education is conducted in such a way that students with learning experience and those without experience are not differentiated. Therefore, it takes a lot of time to learn survival swimming according to the learner's swimming ability, and swimming skills are often learned rather than survival swimming.

As a result of analyzing the composition of the survival swimming program for each phase, it was found that the connection between water education and ground education was insufficient because survival, swimming, and rescue functions were taught at the same time. Due to this lack of connectivity, consigned education companies are providing survival swimming education through their own educational program. In addition, it takes about an hour to get from school to the swimming pool and it takes about an hour to return to the swimming pool. It was found that there were many difficulties in achieving the educational goals due to the lack of time.

As a result of analyzing domestic survival swimming education programs by educational institution, as shown in <Table 1>, the Ministry of Education and the Seoul Office of Education consist of survival function, swimming function, and rescue function, and the Gyeonggi Provincial Office of Education, Gyeongsangbuk-do, and the Ministry of Oceans and Fisheries consist of survival function.

Learning to swim takes a lot of time. However, in general, it takes about an hour to move from school to the swimming pool and to start classes after transfer, which in turn affects class time. Influencing class time is the goal of survival swimming education and difficult to achieve. Insufficient time for education may eventually appear due to insufficient quantity and quality of education. <Table 1> shows a comprehensive analysis of the survival swimming education programs in Korea.

**Table 1.** Analysis of survival swimming education programs in Korea

Institution	Survival Swimming
Ministry of Education	Getting acquainted with the water (adaptation, breathing: exhale) / holding your breath in the water (holding your breath, standing up) When you fall, stay centered and float up / When you fall into the water, grab a structure / Jump without goggles and get to a safe place immediately / Jump into the water (an important step for survival) / Jump away and get out of the floor / Lay down and float / Change direction / Floating on water in various ways for more than 3 minutes / Floating in various ways for more than 5 minutes
Seoul Metropolitan Office of Education	Understanding the properties of water / Preparing to swim / Preparing to enter / Understanding the properties of water / Soaking your face in water / Playing safely in the water / Moving in the water / Holding your breath in the water / Opening your eyes in the water / Stay centered in the water / Lay down / Get it and escape to a short distance / Catching a structure when drowning / Getting in without goggles / Getting and floating / Getting far and getting out of the floor / Floating in various ways / Survival swimming in a river / Survival swimming and requesting a rescue
Gyeonggi Provincial Office of Education	Adapting to the water1 / Adapting to the water2 / Breathing in the water / Floating equipment survival / Bare survival floating 1 / Bare survival floating 2 / Diving / Maintaining body temperature / Moving / Review and comprehensive evaluation / In the water Adapt 1 / Adapt to water 2 / Breathe in water (bobbing) / Go lobster sculling / Go to water brightness / Go with squid kick / Go with squid swimming / Frog swimming I / Frog Swimming II / Review and comprehensive evaluation
Gyeongsangbuk-do	Theory education Safe water play education

	A taste of survival swimming
Ministry of Oceans and Fisheries	Education on survival swimming concept and etiquette in the pool (theory education) / Adapting to the water (basic stage) / Adapting to the water 2 / Overcoming underwater 1 / Overcoming underwater 2 (various floating) / Overcoming underwater 3 (floating) / Securing underwater safety 1. (Moving tools and floating in water) / Securing underwater safety 2. (Life jacket, use) / Securing underwater safety (how to maintain body temperature) / Comprehensive practice and evaluation
Institution	Swimming Function
Ministry of Education	Getting acquainted with the water (walking, moving, playing in water) / Standing up in shallow water / Leaning on the water / Laying down and moving forward / Basic Backstroke / Basic Breaststroke / Preparing for Stroke / Introduction to Stroke / Learning the Basics of Stroke / Learning Stroke / Learning Basic Stroke / Learning Stroke
Seoul Metropolitan Office of Education	Understanding the characteristics of water / Preparing to swim / Preparing to enter / Understanding the characteristics of water / Holding your breath in the water / Floating out of the water / Moving in the water / Standing up in shallow water / Looking down on the face Basics / Lying down Floating / Basic Backstroke / Basic Breaststroke / Preparing for Stroke / Introduction to Stroke / Prone to the Water / Learning Stroke / Learning Breaststroke Stroke / Mastering Stroke
Institution	Rescue Function
Ministry of Education	Requesting a rescue / Floating safely in a life jacket / Wearing a life jacket to maintain body temperature / Float safely using various structures / Know how to rescue the drowning person in an emergency Knowing how to use / Moving while holding your breath under water / Knowing CPR (CPR) / Diving / Short-distance diving
Seoul Metropolitan Office of Education	Understanding the characteristics of water / Preparing to swim / Preparing to enter / Understanding the characteristics of water / Wearing a life jacket / Finding rescue tools / Requesting a rescue / Floating safely in a life jacket / Maintaining body temperature wearing a life jacket / Float safely using various structures / Knowing how to rescue the drowning person / Throwing a structure to the drowning person / Passing through the structure by diving / Moving while holding your breath under water / Knowing CPR (CPR) / Knowing how to use the AED (Automated External Defibrillator) / Moving to a short-distance dive / Rescue experience in rivers and seas

### 3.2 Analysis of foreign survival swimming education

#### 3.2.1 England

In the physical education curriculum of the UK national curriculum, swimming and water safety education was basically made compulsory to secure one's own safety and develop basic abilities. Since 1994, as a legal element, swimming and water safety education has been made compulsory in the physical education curriculum, so swimming education is being conducted through schools. The UK National Curriculum of Education: The Physical Education Curriculum states that training in swimming and water safety is compulsory and that swimming training must be provided at the core levels 1 and 2, at least 25 meters in both levels. You must be able to swim appropriately, confidently, and skillfully at the appropriate distance, and be able to effectively design the freestyle, backstroke, breaststroke, etc. And it is specified that self-rescue should be possible in different aquatic environments. 89% of the school curriculum focuses on the ability to swim 25 meters, 63% on how to use a stroke, and 48% on water safety education.

**Table 2.** UK swimming program

Sortation	Contents
Age	- Level 1: 1st~2nd grade of elementary school / Level 2: 3rd~6th grade of elementary school
Training Hour	-Average 16 times / Average 76 minutes (actual swimming lesson 33 minutes)
Training Goal	-Swim with a minimum of 25m stroke / Use various strokes -Safe magnetic structure in different aquatic environments

Characteristic	<ul style="list-style-type: none"> <li>-Cultivating the basic ability to ensure the learner's personal safety</li> <li>-National swimming groups develop swimming programs in cooperation with the government, local governments and schools</li> <li>-Compensation strategy to report to the school after observing the learning situation of learners or to issue a certificate of completion after satisfying the required level</li> </ul>
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### 3.2.2 The United States

In the United States, survival swimming education is generally included in the basic swimming course and water safety rather than an independent educational program. Curriculum varies depending on the content. Survival swimming education, widely known internationally, is divided into education for infants aged 6 to 12 months and infants from 1 to 6 years old. It takes place over 4 to 6 weeks. If you look at the contents of the education, you learn how to immerse your face in the water without an auxiliary device, turn your body over, come out on the water surface, breathe, then turn your body again to swim a certain distance on your own. This can be seen as acquiring basic survival skills. It is recommended to receive re-education once a year after completion.

**Table 3.** United States Swimming Program

Sortation	Contents
Age	-6-12 months / 1-6 years old / 5-12 years old (whale tail swimming safety education)
Training Hour	-5 times a week for 10 minutes every day (4-6 weeks total depending on learning speed)
Training Goal	-Get into deep water
Characteristic	-Keep your head above the water surface for 30~90 seconds

### 3.2.3 Germany

In Germany, the Minister of Education, the German Association for Sports Studies, and the Federal Association for Supporting Swimming Education emphasize that swimming is a fundamental component of exercise that all students should develop and that it is a key element for active participation in exercise, play and sports culture. Agreed and are working to implement school swimming education. As in other countries, the purpose is to safely protect individual lives from accidents in the water and to enjoy a valuable life by providing excellent support for their own health and leisure life. Such German swimming education is implemented from elementary to secondary education, and supplementary education is provided through school excursions and intensive courses for swimming education. The ability to collaborate is said to play an important role.

**Table 4.** German Swimming Program

Sortation	Contents
Age	-From elementary school to middle school
Training Hour	-1 hour per week for at least 30 minutes for 1 year
Training Goal	-2 hours for 14 days or 2 hours per week for 1 semester or daily for 2 weeks depending on circumstances
Characteristic	- Independent and safe movement on the water, not the detailed technique of swimming speed or shape, and protects body and life

### 3.2.4 France

In France, survival swimming education is taught as the most basic step in a general swimming education program that is conducted step by step. As one of the various physical education programs, it has the purpose of cultivating the spirit that can cooperate with others by knowing about the individual's body, nurturing exercise effort, respecting others with educational values and ethical consciousness. In addition, the acquisition of survival swimming skills is directly related to the lives of French people, and it is implemented as an essential physical activity in the sense that education should be received without discrimination regardless of individual circumstances or conditions. The French Ministry of Education has selected swimming education as the preferred physical education subject since 2011, and announced 'n° 2011-090 du 7 juillet 2011'.

**Table 5.** French Swimming Program

Sortation	Contents
Age	-From the third year of kindergarten to the fourth year of middle school
Training Hour	-5 times a week for 10 minutes every day (4-6 weeks total depending on learning speed)

Training Goal	-Get into deep water
Characteristic	-Hold the head with the head above the water surface for 30 to 90 seconds

### 3.2.5 Japan

In Japan, the collision of the Shionmaru on May 11, 1955 resulted in 168 casualties, including 100 elementary and junior high school students, guiding teachers, and parents on a school trip. With this opportunity, Japan promoted the establishment of swimming pools in elementary and junior high schools and adopted swimming lessons for school physical education and disseminated them throughout the country. The most basic and important purpose of swimming education in Japan is to protect one's life and understanding the physical characteristics of water is a logical way to develop physical abilities and to promote intellectual development regarding safety in water and to prevent water accidents in advance. Because it is largely related to developing thinking ability, he understands and learns about safety education in water such as stroke with clothing, exercise to develop strength, and water pressure.

**Table 6.** Japan Swimming Program

Sortation	Contents
Age	-From elementary school to high school
Training Hour	-June to July 1-2 times a week
Training Goal	-Around 10 hours per year
Characteristic	-Promoting intellectual development regarding safety and protecting one's life on the water

## 4. Discussion

The purpose of this study is to provide basic data for developing a systematic survival swimming program by analyzing domestic and foreign survival swimming programs and deriving problems in domestic survival swimming education. As a result of the study, the implications of the domestic survival swimming program necessary for the promotion of systematic survival swimming programs and related education are as follows.

First, the current domestic survival swimming education is divided into classes and training sessions. As a result of the study, among overseas advanced cases, for the purpose of promoting silver swimming education in Germany, students pass each stage divided into gold, silver, bronze, and seahorse for the purpose of obtaining a certificate, and if they pass each stage, they attach a mark to their swimsuit to give them qualifications. You learn not only your own safety, but also the ability to rescue others (Deutsche Lebens-Rettungs-Gesellschaft, 2021). It can be seen that the quality of education is improved through the composition of educational programs according to each individual's swimming ability level. Therefore, in order to construct a flexible and reasonable program for survival swimming education, it is thought that it is necessary to develop an educational pro-gram according to each individual's swimming ability through education by level of learners.

Second, it is thought that the reinforcement of the leader's competency to improve the quality of education will have a positive effect for the development of survival swimming. In France, swimming lessons are conducted under the responsibility of the homeroom teacher, and experts approved by the school district superintendent or volunteers with swimming train-ing qualifications help the teacher in swimming instruction. Through the training of experts in survival swimming, knowledge of the aquatic environment and water physics, physiology, and psychology that can occur in daily life, information on the aquatic environment and aquatic accidents, and safety that can occur anytime, anywhere It is necessary to nurture professional knowledge-type leaders by holding a workshop to strengthen individual leaders' knowledge and capabilities.

Third, it is necessary to develop a unified and systematic program. What is commonly suggested in overseas survival swimming programs is to develop the ability to protect an individual's life in case of a water accident and to prevent accidents that may occur on the water. In Korea, survival swimming programs have been developed and distributed by various education-al institutions such as the Ministry of Education, the Seoul Metropolitan Office of Education, and the Gyeonggi Province Office of Education. It is considered that a systematic and unified program should be developed to avoid any differences

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