A STUDY OF CHARTER SCHOOL ENVIRONMENTS IN U.S.A.

— Effects of management, curriculums and relations with other organizations on school environment —

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Abstract

Many of those who are working to reform publicly run schools in Japan are interested in the "Charter School" system in the United States. The system allows people to establish a new kind of public school that has freedom of curriculum design, school management and school selection, factors that have subsequently introduced open competition in the U.S. public school system. The striking difference between this new type of public school and conventional schools can be found in the school environment.

The focus of this thesis is to analyze how school environment created for Charter Schools in the U.S.   The analysis is based on case studies of four successful Charter Schools and the results of questionnaires conducted at about one hundred such schools. The three key viewpoints in the analysis are as follows:

-Management
-Education program
-Relations with external organizations

Key words:
Charter School, public school, free competition, school management, external organization

1. Introduction –Background of the study

The limits of the conventional public education system, where a uniformed learning program is applied to every student, have been highlighted all over the world. Japan is not an exception. The general trend regarding this point in Japan is to an increasing call for greater independence in the management and curriculum of each public school in order to provide education services that better accommodate individual needs [i]. Given this social background, the Charter School system [ii] in the United States (hereafter, referred to as "CS") is being closely evaluated. CS refers to publicly run schools that are exempted from almost all legal restrictions regarding their management and educational programs, which are set up by volunteer teachers and parents. Such schools are held accountable for the results of their own curriculums and management. Poor results could force their closure within a few years. The course of CSs, which allow residents of the area to take the lead in preparing diverse education programs, has been watched closely as a bold model for change in the public school system in general. The limits of uniformity in the public school systems in the United States and Japan alike have been pointed out, but in the former, the number of CSs has been on the rise since the first CS bill was enacted into law in the state of Minnesota. The system has delivered various educational results. In recent years, in Japan as well, the move to introduce the CS system has been gaining ground [iii]. The traits and philosophy of the CS system in the U.S. are likely to have some effect on the educational reform models currently being implemented in Japan.

However, when looking at the physical environment of CS, it is apparent that there is still a myriad of issues that need to be resolved in the CS system. The characteristics of CSs in terms of the physical environment necessary for school management, such as school buildings and schoolyards, (hereafter referred to as "physical environment") differ greatly from those of conventional public schools. CSs are publicly funded and yet are freely established in accordance with individual management strategies under the CS Law. Some states do not cap the number of CSs that can be approved to for establishment. In these states, however, those who establish CSs must, in principle, raise the funds needed for the physical environment by themselves. The physical environment of existing public schools, which are run under the conventional system as entities almost perpetually in charge of the function of education in the given region, is managed tactically by local administrations. The physical environment of such conventional public schools and that of CSs largely differ in terms of their elements and building process. In the U.S., the difference has led to some confusion and various problems. A similar problem could happen in Japan as well as the country heads towards the liberalization and independence of public education. Therefore, it is necessary to analyze the actual situation and stipulate countermeasures as early as possible.

2. Purpose of Study

With this awareness of the problem, this study was conducted as the basic phase of a series of studies on CS environment. For this study, we looked at CS physical environment in the United States from the two elements of "location" and "building" and surveyed and analyzed how CSs deal with these environmental elements. The purpose of the study is to derive the effects of free competition on school managers' views regarding school location and building. On assessing them, we hypothetically selected the following three factors as variables that would cause changes in managers' awareness: the managerial factor, the educational factor and the factor of competition and cooperation with external organizations. We define these three factors herein as the "three factors of CS environment".

The first is the factor of management, such as cutting costs and securing income sources. In the conventional context of school construction, location selection of schools is a function of urban development and is determined in accordance with demographical distribution. School buildings are the assets of local autonomies from beginning to end. Thus, tactically located schools are, in principle, not to be moved to other sites to suit their own purposes. With CSs, on the other hand, everything, including school location and timing of establishment, is decided based on judgments passed by each school. Funds for building the physical environment needed to set up such schools also must be raised by each school according to its own method and depending on their independent managerial judgments. The creation of a school environment would have a serious impact on a limited school budget. Therefore, it is affected by not only direct factors, such as maintenance costs of the school building, but also indirect factors, such as distribution of local population or their clients. This study intends to clarify the effect of such managerial factors on selection of location and building.

Secondly, the factor from an educational viewpoint [iv]. CSs were originally set up to provide highly independent education and, in fact, CSs with a variety of educational programs are in operation in the U.S. Besides independence in management, independence of education is also guaranteed to CSs, and that is exactly why the system could introduce free competition to publicly run schools. Considering their income structure, it is difficult to see CSs being set up as for-profit organizations. The purpose of opening CSs is not merely to achieve managerial success but also, or in some cases rather, to realize the particular learning style to which the founders are committed. This is the reason this study focuses on the educational factor.

For instance, CSs adopt teaching methods that are different from the conventional lecture-oriented method, such as learning in small groups, field studies, creation and production and project learning, which purportedly affects the creation of the physical environment. The study intends to clarify the effects of the differences in teaching styles on the creation of CS physical environment.

The third factor is the existence of competitors and cooperating partners. CSs as independent organizations face challenges in both management and education and it is impossible for them to ignore the existence of other entities. This study intends to clarify the effect of external groups in the education market, either rivals or collaborators for mutual success, on the creation of CS environment.

For instance, schools could become involved in activities where they cooperate with each other to complement the environment. As CSs are highly independent in terms of their relations with other organizations, each school devises measures to effectively utilize its environment, including forming its own research network, to become eligible to use external facilities and to share facilities with other organizations. One of our aims in this study was to collect samples of actual measures devised by CSs in dealing with other organizations for better utilizing their environment.

The purpose of this study, by conducting a survey of CSs in the United States, is to find out how public schools, in the face of free competition, are dealing with the three factors of CS environment in terms of building physical environment.

3. Significance of This Study

As for advanced research focusing on stages of CS activities, Joe Nathan (2001) [v] has touched upon the subject. Although the focal point of his academic pursuit is mainly pedagogical, he touches upon the current situation and points out that physical environments, such as school buildings and schoolyards, are often shared among schools, which tend to bring about fresh human exchanges, positively affecting students' learning. However, Nathan failed to mention important aspects, such as the process of how such environments were created, ideas and strategies on the part of school operators over such shifts of physical environment and what supports in effect such formulation of physical environment. The focal point of our study is to learn the factors taken into serious consideration by the founders of schools autonomously functioning within the framework of a citizen-led initiative, establishment and operation of a school in a self-responsible manner and free competition, which are the characteristics of the CS system. This study observes the shifts in awareness on location and building when the new condition of free competition is introduced to schools, and by doing so, is the first to present a study on a school system in this contemporary context in which social services are provided by citizens. We believe this study has social significance as a study on the process of environmental improvement.

4. Contents of Research

4.1 Research Method

For this study, research was conducted in two parts. First, three case studies concerning typical CSs in the U.S. were conducted. The purpose of the case studies was to clarify ideas and

viewpoints affecting the formation of CS physical environment and to verify the validity of the analysis on the three factors of CS environment that we set up hypothetically. The cases were preliminary studies ahead of the subsequent research involving questionnaires. The questionnaires were conducted at many CSs actively operating in three U.S. states. The questions included factors, such as cost, safety and consistency of educational programs, that affected each school in terms of creating physical environment. The second part of the research was designed to elucidate to what extent the CSs' ideas and viewpoints that we derived through the first half of the research commonly affect CSs as a whole.

4.2 Objects of Research

4.2.1 Case Studies

The subjects of our case studies were two CSs operated in Minnesota, as shown in Chart 4.1. We selected Minnesota because it was the state that enacted the first CS Law in the U.S. in 1991. As well, there are relatively many CSs, which made it easier for us to see the process of change following the establishment of schools. Our criteria in selecting the three particular cases included name recognition in the relevant school districts and stable management since establishment.

Name	Location	Established Year
City Academy	St. Paul, Minnesota	1992
Minnesota New Country School	Henderson, Minnesota	1994

Chart 4.1: Objects of case studies

Items	Methods
Observing environment around school	photos & video
Observing environment in school	photos & video
Surveying actual learning activities	interview teachers, photos & video
Surveying pivotal points	interview schoolmaster, person in charge & teachers
Surveying actual process	interview schoolmaster, person in charge & teachers, study literature on school web sites, papers by CS research organization

Chart 4.2: Items surveyed during fieldwork on structuring environment

We visited the schools for the case studies in late May 2002 and conducted fieldwork research into items shown in Chart 4.2. The purpose of the surveys on the current environment and the process of building the environment were to learn the details on how the environment at each school has been changed and to extract ideas and viewpoints from school officials affecting such environmental changes.

4. 2 .2 Questionnaires

We conducted questionnaires at CSs in three states in the U.S. As subjects of the questionnaires we selected 514 CSs in the states of Minnesota, California and Alaska. Of the 514, 117 schools responded, or 22.8%. These three states were selected because an

assessment of their laws governing CSs showed them to be either (A) strongly effective, (B) moderately effective or (C) weakly effective [vi], giving us a wide base of issues to study. The questionnaires were conducted between November 28, 2002 and January 5, 2003.

Object States	Number of Schools Requested	Number of Schools	Response Ratio
Alaska	12	6	50.00%
California	480	95	19.80%
Minnesota	22	16	72.70%

Chart 4.3: Response Ratio by State

Criteria	Minnesota	California	Alaska
Number of schools allowed	5	5	2.3
Multiple chartering authorities	4.5	4	1
Eligible chartering applicants	5	5	5
New starts allowed	4.75	4.75	5
School may be started without evidence of local support	3.5	3	1
Automatic waiver from state and district law	5	2	0
Legal/operational autonomy	4.5	2	0
Guaranteed full per-student funding	3.5	3	3.5
Fiscal autonomy	5	3	1
Exempt from collective bargaining agreement/district work rules	4.5	4	0
Total points	45.25	35.75	18.8
Rank 2002 (among 40 states)	2	15	34
Number of charters	87	427	15
Overall evaluation (in A, B, C, D or F)	A	B	D

Chart 4.4: CS Laws Ranking

The questionnaires were conducted on-line by posting the questions on the web. Responses were collected using a CGI program [vii]. First, we sent a request for cooperation to an e-mail discussion group [viii] to which the 514 selected schools subscribe, and then waited for them to access our website.

The questions include ones regarding changes in locations and buildings they have experience and the reasons. We made the questions regarding the reasons and timing of the changes correspond to the "three factors of CS" whose validity we had verified in the case studies. We also had questions concerning the style of education, cooperation with other organizations, donations and government support to learn what sorts of efforts each school was making in forming their environment.

5. Results of Researches

5.1 Results of Case Studies

We conducted case studies on two schools: City Academy [ix] (hereafter referred to as "CA") and Minnesota New Country School [x] (hereafter referred to as "MN"). The current

situation of the environment of these two schools and noteworthy points on the process of building the environment that came to our knowledge through the studies are as follows (both schools are engaged in various activities that are different from those in conventional public schools, including cooperation with external organizations, but we have extracted only the points concerning physical environment here):
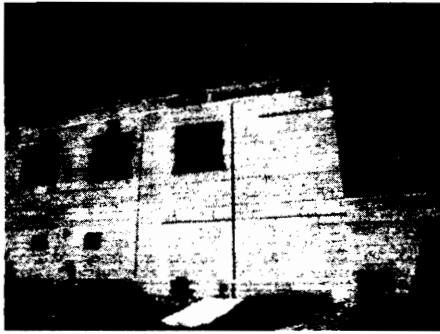

Photo5.1: CA(Wilder Recreation Center)   Photo5.2: MN(current school building)

5.1.1   City Academy

Steppingstone Theater

Penumbra Theater

Science Museum

2. Lakeside Center
   Started using in 1999
   Owned by St. Paul City
   Opens from September to May
   Opens between 8A.M. and 3P.M.

1. Wilder Recreation Center
   Started using in 1992
   Owned by St. Paul City
   Opens all thorough the year
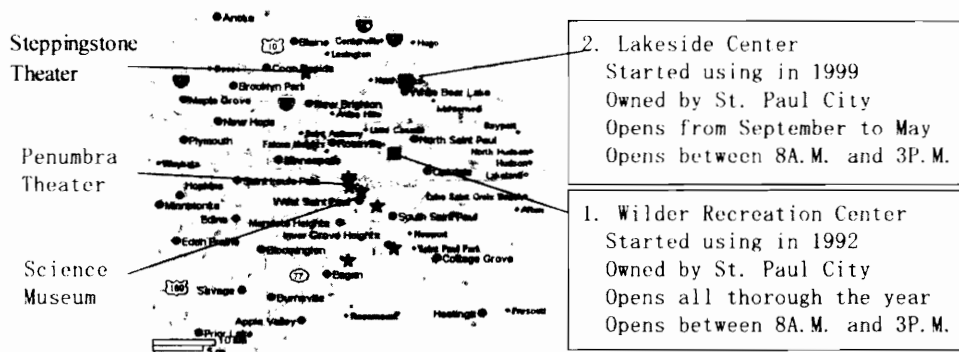   Opens between 8A.M. and 3P.M.

Chart 5.1: Distribution of learning environment for CA

Photo 5.3: classroom at Wilder Recreation Center   Photo 5.4: "Construction" program

CA is a CS that successfully built a distributed learning environment through collaboration with external entities, including government bodies.

The outstanding traits found in the school's environment are: 1) it uses a facility owned by the local autonomy as the headquarters of the school, 2) it acknowledges the environment of external organizations as a physical environment that can be used for students' learning.

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Chart 5.1 shows the distribution of CA's learning environment and the years these facilities were built, which we ascertained through our interviews. The activity bases of the school are distributed throughout the city of St. Paul. As of 2001, the school provides learning programs in cooperation with 17 external bodies. These programs are provided at seven sites related to those external bodies, in addition to two school buildings. Students use the relevant learning environment depending on the classes they take.

This style of learning environment was created to suit the school's particular curriculum. CA adopted a learning system called the "program system", under which programs that are different from regular education courses are provided using groups, facilities and human networks in local communities. A housing construction project for low income families in cooperation with the administration can be cited as an example. In light of its main purpose to improve the academic performance of children from low income families, nurture their sense of independence and foster their zest for living, the school implements programs with themes to which children can relate.

The two school buildings in the Wilder Recreation Center and the Lakeside Recreation Center are public facilities owned and managed by the city of St. Paul. CA uses these facilities exclusively as school buildings between eight A.M. and three P.M. The school rents the facilities from the city for two purposes, to effectively use the management resources and to maintain opportunities to communicate with local officials. Behind the conclusion of such contracts are the merits for the city: to effectively utilize such facilities and to improve the academic performance of children from the surrounding areas.

5.1.2   **Minnesota New Country School**

MN represents a CS case that could flexibly create an environment due to its unique educational program.

The school has three environmentally remarkable points: it moved the school to a location 4.5 kilometers away, individual desks are mainly used for learning and it was once operated in extreme environment of three small vacant shop spaces in a mall and now is located in a former mega supermarket in a suburb.

Chart 5.2 shows where the former school was located and the current location.

The spaces that the school used immediately after its opening were vacant shops with limited square meters that could be used as learning areas. The school later moved to a renovated supermarket building and now enjoys vast space. It moved such a long distance despite being a publicly run school assuming the responsibility for education of local communities.

MN also adopted its own project-based learning program. Individual students come up with projects based on their own interests and select subjects that are necessary for

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implementing the project. As the school does not provide conventional lecture-style classes, it does not need large classrooms. When it had a limited number of students at the time it was opened, it only needed enough space for students to do their work. The fact that it did not need a large-scale school building and could be located in a busy area worked well in terms of facilitating exchanges with local residents and gaining recognition. Subsequently, the school was pressed to expand the learning space as the number of students grew. In 1997, in order to secure space, it rented vacant shop spaces at a shopping center in a nearby area and moved all the school functions there.
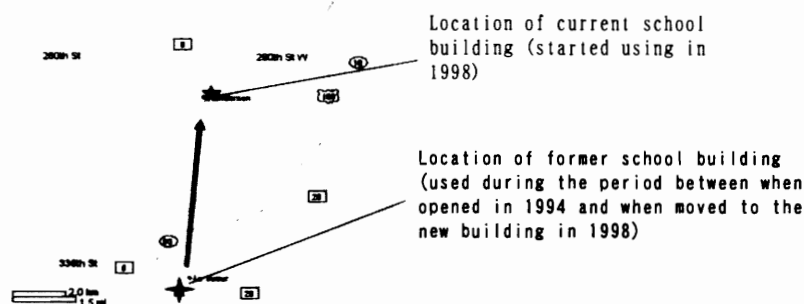

Location of current school building (started using in 1998)

Location of former school building (used during the period between when opened in 1994 and when moved to the new building in 1998)

Chart 5.2: Shift of learning environment for MN

Photo 5.5: Learning environment at MN (individual desks)   Photo5.6: current school building

		Location	Building	Activities outside school
Outline	CA	Having set up its headquarters at the Wilder Recreation Center in a residential area of eastern St. Paul, it built an environment for dispersed activities in cooperation with other organizations.	Mainly using two public facilities; Wilder Recreation Center and Lakeside Center, both owned by the city	Affiliated with various outer groups to run educational programs. Students autonomously develop learning activities in various sites
	MN	Located on the outskirts of the city. The site is 4.5 km away from the previous building.	Refurbished former supermarket and set up individual desks in vast wall-less space	Students use public library for their researches. They are required to conduct field work and interviews outside of the school
Building process	CA	When opened in 1992, it started using the Wilder Recreation Center. In 1999 it opened an additional facility in the Lakeside Center (the use is limited to the off-season period between September and May.)	Since both buildings are public facilities, neither refurbishment nor expansion was done. It rents the spaces during less busy hours.	Every year since opening, concluded a contract with each organization. Renewing contracts in accordance with its education program
	MN	Opened in 1994 at three vacant shop spaces in a mall. Moved in 1998 to the current building 4.5 kilometers away from the original site.	Refurbished a former shopping center in 1998. Using the facility up to date	Since opening, the policy remains that students engage in external activities as necessity rises in individual projects

Chart 5.3: Physical Environment of CA and MN

		Location	Building	Activities outside school
Influence of Managerial Factor on Environment Building	CA	Responding to students' needs by implementing educational programs reflecting local issues	Focused on less busy public facilities as potential school building before concluding the contract. This contributes to suppressing expenditures for environmental improvements and allowed allocation of larger budget to educational programs.	Using dispersed facilities enables more students to commute.
	MN	When opened, operated in a mall to suppress expenditure and expand opportunities for contact with local residents. With the rise of recognition level of the school resulting in increased revenue and stabilization of management, moved to a new and spacious building in suburb	Initially, due to problems of budget and number of teachers, vacant shop spaces were preferable. Since management stabilized, a larger space to accommodate a larger school structure was needed.	Researches around the school led to higher recognition of the school in the community. Students' presentation sessions of outcome of their researches is open to the local folk.
Influence of Educational Factor on Environment Building	CA	Educational program corresponding to local issues was introduced	Its learning environment works provided that students' daily learning activities are conducted at dispersed external organizations and learning hours vary depending on student	Reflecting the purpose of opening the school to practice learning using local community, collaboration with external organization is the basis of the
	MN	It is not located too far from communities so that students' research activities are not impeded	Individual project-based learning style is conducted mainly at desks for individual students, therefore conventional classrooms are not necessary, in principle, and the school could or can operate with the limited space of small shops or at the vast space of a former	Researches outside of the school correspond to its educational goal of enhancing abilities of research and project management
Influence of Relations with Other Organizations on Environment Building	CA	Contract to use public facility as school building was smoothly concluded as the local administration had a hard time solving the problem of education in the location, such as declines in academic performance and number of graduates	One of the conditions to open the school was to be able to use a municipal facility with reasonable rent	Dispersed learning environment radiating from its core educational program was realized with cooperation by outer organizations
	MN	Moving of school building to a far location was realized after gaining consent from students and parents	Received financial contributions from people who highly evaluated the concept and potential outcome of its project-based education style	Research activities around the school enjoy cooperation and support by local communities

Chart 5.4: Elements Affecting Environment of CA and MN

(Extracted elements that affected environment building either directly or indirectly. Elements shown with

gray background are seen having greater influence)

5.1.3 Summary of Results

Through the case studies of environmental shifts at CA and MN, we could confirm the two factors of "location", or where to locate the school, and "building", or in which building to operate the school, were taken into consideration as important factors of school environment.

The studies clarified that activities outside the school through cooperation with other organizations must be considered when determining the two elements. As for factors to evaluate school environment, we have learned that in both cases their own learning programs and their styles helped shaped the physical environment and its timing. Also, both schools selected and built the environment based on managerial decision making. Thus we confirmed that the "three factors of CS environment" that we hypothetically set up were actually working as effective variables for analyzing the physical environment of CSs.

5.2 Result of questionnaires

5.2.1 Experience of physical environment building

Graph 5.1 shows the result of responses to a question on "experience of physical environment building" [xi] As shown in the graph, 70% of the respondents said they experienced physical environment building in one way or another at the time of setting up

the CSs or during their operation. Graph 5.2 shows the breakdown of the types of CSs when set up. A majority of them were newly set up.
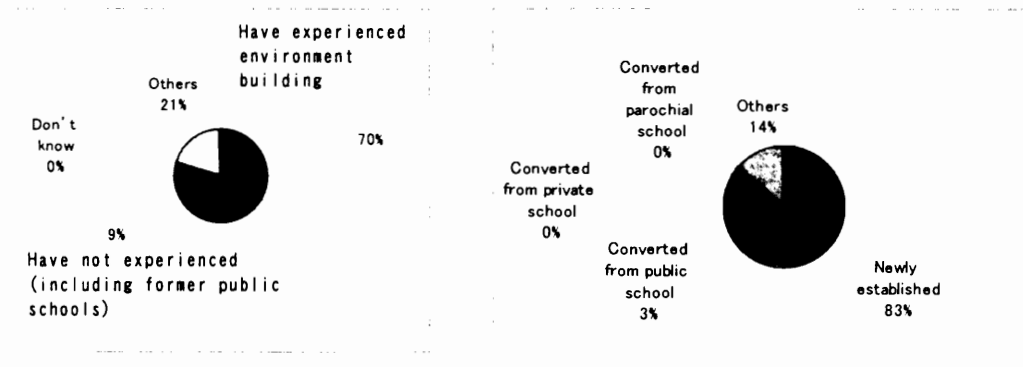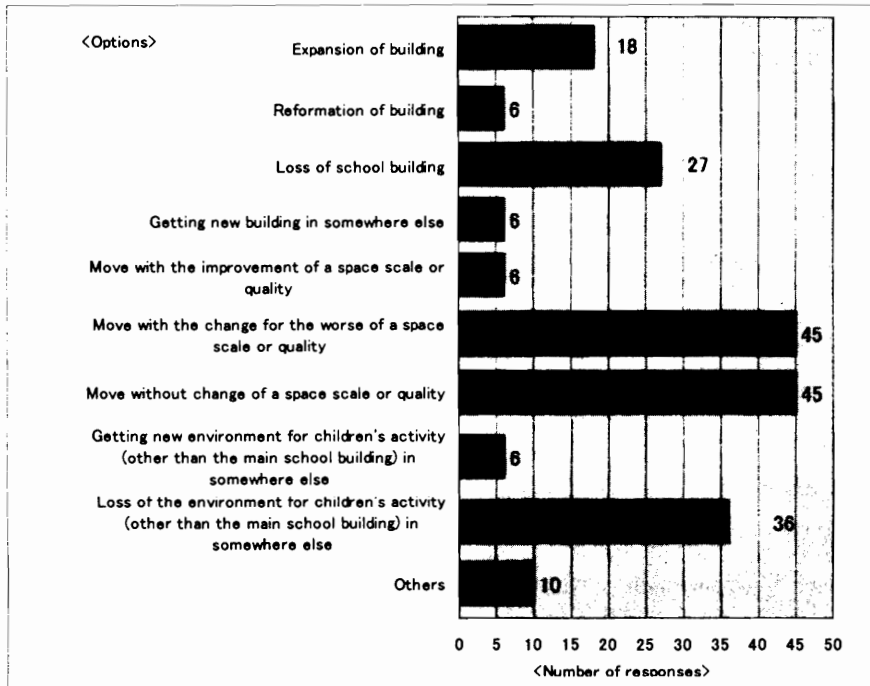

Graph 5.1: Experience of Environment Building   Graph 5.2: Types of Charter

5.2.2   Kinds of and reason for physical environment building experienced

The specific kinds of physical environment building experienced are as shown in Graph 5.3. The most common responses, "Acquired a building at a new site" and "Moved with improvement", can be seen as an aspect of their operational trait that CSs do not have to stick to a fixed site or location. Also, those who experienced a change as a result of "losing" environment were in the minority. As of January 2003, the 11th year since the first CS system was implemented, a majority of CS operations have expanded or extended their environment.

Graph 5.4 shows the reasons for physical environmental changes stated by the respondents. The major factor for such changes is the growth in student numbers, again suggesting expansion of CSs. The fact that no CS cited "aging of facility" as a reason is probably related to the majority shown in Graph 5.2 who said "acquired building at a new site". The implication is that more CSs will face the problem of "aging of facility" as they enter the matured phase in the future. We have placed questions shown in Graph 5.4 into three categories based on their nature. Namely, "Growth in the number of students", "For gathering more students" and "Increase in budget" have been categorized as "Managerial reason"; "Change in educational program", "To obtain an environment with more advanced functions" and "There are many public facilities students can use for their learning" have been categorized as "Educational reason"; and "Shift in activities other than education program", "Invited in" and "Cooperation requested by other organization" have been categorized as "Reason related to relations with other organizations" (excepting two items that no respondent selected). Graph 5.5 indicates the categorized responses shown in Graph 5.4. Of actual experience of environmental building, 49% is attributed to the managerial reason. It is also noteworthy that the reason related to relations with other organizations is as high as 18%.

Graph 5.3: Kinds of experienced physical environmental building number of responses
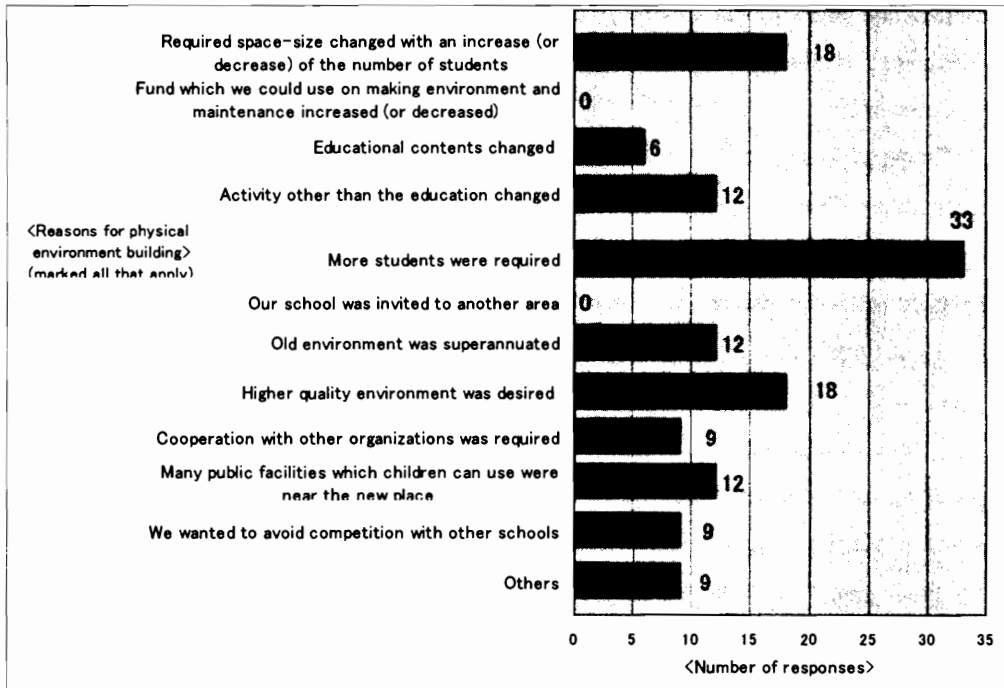
**Graph 5.4: Direct Reasons for experiencing physical environment building**
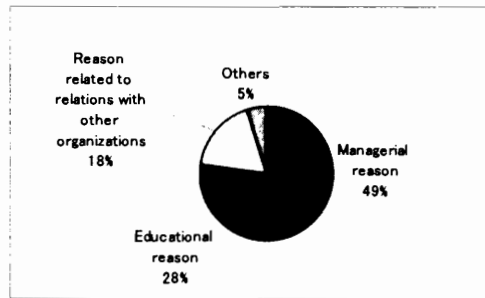
Graph 5.5: Reasons for experiencing environment building (comparison by category)

5.2.3 Point on which importance was placed in building physical environment (Location)

We asked CSs what was most important and what was realized in terms of location when building the physical environment. We told the respondents to select one of the following four answers on each question: 1) "thought it as important and actually became so", 2) "thought it as important but did not became so as a result" 3) "not thought it as important but actually became so" and 4) "not thought it as important and did not become so as a result". Graph 5.6 shows the distribution pattern of items for which a larger number of respondents selected answer No.1 compared to the other answers. The items shown here are the items to which a relatively large number of respondents attached importance and realized when selecting location, implying items that are commonly required by CSs.

Meanwhile, Graph 5.7 shows the distribution pattern of items for which answers selected were bipolarized on answers No.1 and 4. Such items are seen as having different significance depending on the CS, i.e. items that would differentiate environment of CSs.

These items are sorted out in Charts 5.5 and 5.6. In addition to "safety of students", managerial factors, such as "donation" and "administrative support", are the items commonly seen as important by the respondents, while answers differed on "number of residents in surrounding area", "traffic density" and "utility value of the plot of land".
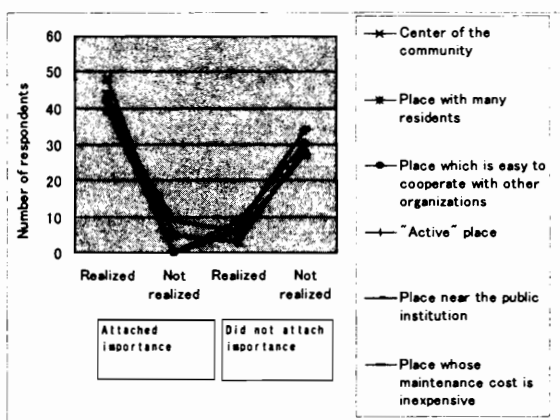
Graph 5.6: Elements on which importance
was attached when selecting
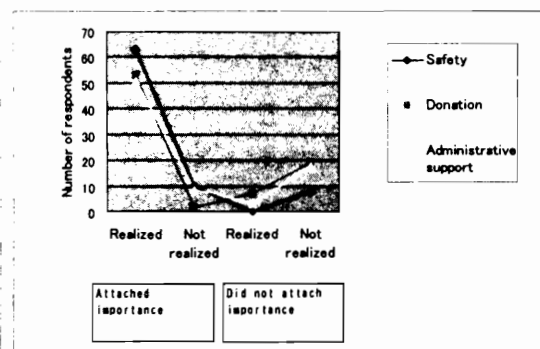
Graph 5.7: Elements for which answers
differed when selecting location

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The four points shown in Graphs 5.6 and 5.7 from left to right correspond to the total number of answers chosen from 1) "thought it as important and actually became so", 2) "thought it as important but did not became so as a result" 3) "not thought it as important but actually became so" and 4) "not thought it as important and did not become so as a result" to the nine questions on location.
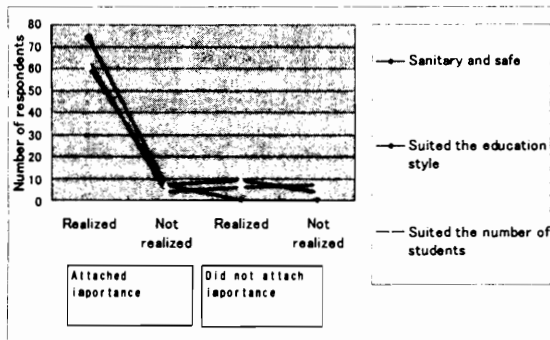
	Attached importance		Did not attach importance	
Items	Realized	Not realized	Realized	Not realized
Safe location	77.8%	12.3%	0.0%	9.9%
Obtainable with donation	65.4%	2.5%	8.6%	23.5%
Sufficient support by administration	63.0%	11.1%	3.7%	22.2%
Average	68.7%	8.6%	4.1%	18.5%

Chart 5.5: Distribution of responses on items on which importance was placed and realized in regards of location
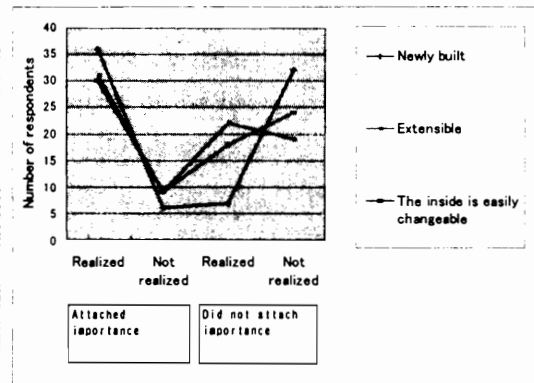
	Attached importance		Did not attach importance	
Items	Realized	Not realized	Realized	Not realized
Center of the community	59.3%	0.0%	7.4%	33.3%
Place with many residents	54.3%	6.2%	3.7%	35.8%
Place which is easy to cooperate with other organizations	51.9%	0.0%	11.1%	37.0%
"Active" place	49.4%	0.0%	8.6%	42.0%
Place near the public institution	49.4%	0.0%	8.6%	42.0%
Place whose maintenance cost is inexpensive	48.1%	11.1%	7.4%	33.3%
Average	52.1%	2.9%	7.8%	37.2%

Chart 5.6: Distribution of responses on items for which answers differed with regard to location

5.2.4 Point on which importance was placed in building physical environment (Building)

Graph 5.8: Elements on which importance
was attached when selecting building

Graph 5.9: Elements for which answers
differed when selecting building

Graphs 5.8 and 5.9 show the results of questions on building. Just as with those on location, the answers here were a combination of either attached importance or did not and either realized or did not. While educational factors, such as "suitable for educational program" and "suitable for the number of students" are commonly selected as items seen as important among respondents, answers for other items, such as "newly built and well equipped including air conditioner", "easy to refurbish" and "possible to expand in the future", varied. The responses were sorted out in Charts 5.7 and 5.8. Just as with location, importance was placed on safety. When it comes to building a structure, coherency with

educational programs and the number of students are also seen as important. Answers clearly varied for functions and equipment as well as expansibility of the building.

The other items included "spacious", "economical" and "well equipped with educational tools", but no clear tendency was detected.

Items	Attached importance		Did not attach importance	
	Realized	Not realized	Realized	Not realized
Sanitary and safe building	91.4%	8.6%	0.0%	0.0%
Building whose space's number and size suited our education style	79.0%	4.9%	7.4%	8.6%
Building which suited the number of students	75.3%	8.6%	11.1%	4.9%
Average	81.9%	7.4%	6.2%	4.5%

Chart 5.7: Items on which importance was placed and realized in regard with building

Items	Attached importance		Did not attach importance	
	Realized	Not realized	Realized	Not realized
"New" building where equipment of air-conditioning etc. is ready	44.4%	7.4%	8.6%	39.5%
Building which is extensible in the future	38.3%	11.1%	27.2%	23.5%
Building which the inside is easily changeable	37.0%	11.1%	22.2%	29.6%
Average	39.9%	9.9%	19.3%	30.9%

Chart 5.8: items for which answers varied with regard to building

5.2.5 Sharing physical environment

Items	Percentage
Intentionally shared	62.50%
As a consequence shared	5.00%
Never shared	23.00%
Don't know	0.00%

Items	Percentage
Intentionally shared	51.00%
As a consequence shared	3.00%
Never shared	33.00%
Don't know	0.00%

Chart 5.9: Experience of sharing building   Chart 5.10: Experience of physical environment other than building

Sharing partners (top five responses)	Number of responses
Other schools (including CS)	23
Youth organizations such as Girl Scouts	11
Administration and local autonomy bodies	7
Churches	6
Universities	5

Chart 5.11: Sharing partners

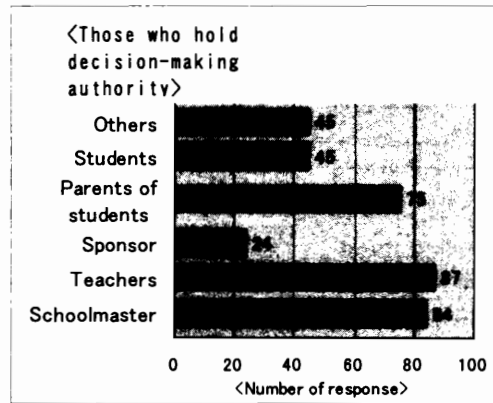| Sharing physical environment (top five responses)	Number of responses
Classrooms	19
Special rooms, such as laboratory	13
Large multi-purpose rooms	9
All physical environments	8
Schoolyard	3
Gym	3

Chart 5.12: Shared physical environment

Responses on sharing physical environment were sorted out in Charts 5.9 to 5.12. 60% and 50% of the respondents said they have intentionally planned and actually shared on a

daily basis buildings and other environments such as schoolyard. As for sharing partners, "other schools", including CS, is atop the list by 31.5% of those who have shared physical environment, followed by youth groups, such as Girl Scouts and a private karate school. Among the shared environment, "classrooms" came atop the list followed by almost all facilities at school, such as "special rooms", "gym" and "schoolyard". In some cases, all of the physical environments have been shared.

5.2.6 Who holds decision-making authority on building physical environment

Graph 5.10 shows the responses to a question on who holds decision-making authority when building physical environment. Responses were not limited to schoolmaster as the chief executive officer but many of them included teachers in charge of education and parents of students.

Graph 5.10: Who has a say and decision-making power on building physical environment

5.2.7 Learning Styles
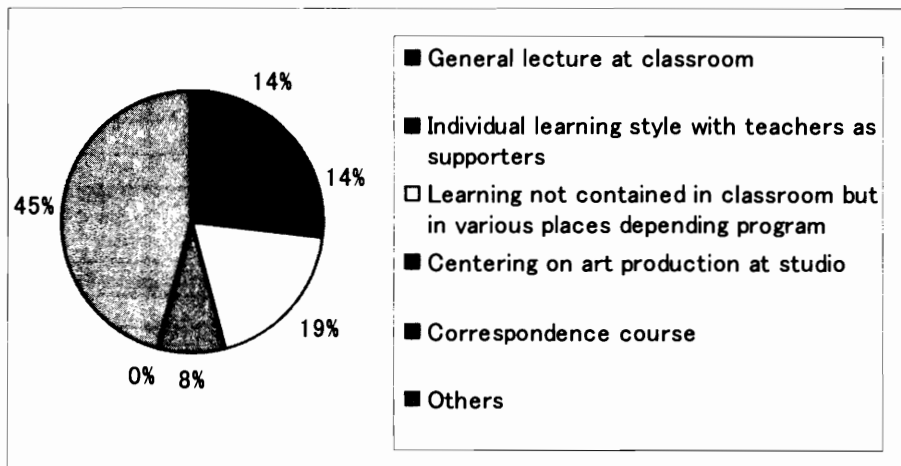
Graph 5.11: Education styles adopted by CSs to which respondents belong

Graph 5.11 shows the results of a question on education style at respondents' schools. CSs adopting conventional lecture styles are limited to 14%, while 45% responded with

16

descriptions because their styles did not fall in any of the prepared categories, suggesting most CSs are providing education in their own styles. Parenthetically, factor analysis of these figures and data shown in Graphs 5.3 to 5.9 did not bear any noteworthy results.

6. Observations

6.1 Effect of managerial factors

Many of the respondents of the questionnaires were CSs that experienced building new environment to cope with the growth in the number of students or whose management was being expanded. This is believed to be because most of the respondents were young CSs with short histories at the time the survey was conducted and stabilization of management was a huge challenge they were facing in general. With that background, managerial factors are seen affecting the building of environment in many aspects. As Graphs 5.4 and 5.5 indicate, half of those who have experienced environment building in the past cited managerial factors as a reason for the need to do so. Also, importance was placed on two elements leading to cost cuts: donations and administrative support.

In Chart 5.4, items that are slightly different from elements that were required for conventional public schools are included. Managerial factors are observed influencing them, as well. Selection of a location having high traffic density and a lively atmosphere can be placed at the other end of the spectrum from the traditional neighborhood-oriented selection in which the center of a residential area far away from arterial roads is the best location for schools. However, this is easily explainable as a managerial decision to increase the opportunity of daily contact with residents who are potential clients. Answers, such as "Easy to cooperate with other organizations" and "There are many public facilities around", imply there are other schools and public organizations nearby, which does not mesh with the basic idea of allocating public facilities in a well-balanced manner to avoid crowding. Descriptive answers to these questions also proved that such decisions are attributed to operative reasons, such as selecting locations suitable for gathering students that would help a CS survive the competition, sharing facilities with other schools to cut costs, and the like.

The significance of the fact that sharing physical environment with other organizations is widely and generally practiced is also attributed to managerial merit, in terms of suppressing expenditure. As for the reason for sharing facilities, 33% of descriptive responses said it was a good way to be involved with local communities and to build good relations. This is probably due to the position unique to CSs that they must not only just gather students but also pass screenings every few years to have their Charter renewed. We infer that their tendency to share environment for activities with other schools and organizations, such as Girl Scouts, is attributed to their managerial decision to proactively build relations with youths and their parents in the relevant local communities.

6.2 Effect of educational factors

The result of the questionnaires implied that educational factors have a large effect on selection and building of structures rather than location. What is commonly viewed among respondents as important and was actually realized in terms of building environment was "suitability to the educational program" and "suitability to the number of students" rather than items related to cost.

As Graph 5.11 indicates, CS education styles very much vary. That led to our inference that there is a tendency among CSs to realize their managerial strategy by location and educational strategy by building.

Learning styles based on exchanges and involvement with people from external organizations and styles for learning in various environments outside of school account for about 45% of all respondents [xii]. It is difficult not to see the relation between this figure and the fact that many are sharing facilities with other entities. In fact, many respondents described the educational merits of sharing environment.

The results of our survey showed that, when it comes to selecting location and building environment, the opinions of not only those who are held responsible in management, such as schoolmasters and sponsors, but also those who are supposed to be held responsible on the educational front, including teachers and parents of students, are almost equally heard. This implies that environment building of CSs is affected by managerial factors and educational factors.

6.3 Effect of relation-building with other organizations

According to the results of our survey, many CSs are involved with other organizations in building physical environment, such as sharing a building. This is attributed to both managerial and educational factors as mentioned in 4.1 and 4.2. At least from a viewpoint of environment building, other entities are seen more as partners with both sides benefiting from cooperation rather than rivals competing in the same market.

7. Conclusion

Through the case studies, the "three factors of CS environment" hypothetically set up in the section on purpose were confirmed to be effective variables to a certain extent for analyzing the physical environment of CSs. Our survey using questionnaires incorporating the three factors verified their effect on environment building of CSs. The analysis based on the three factors suggested the following behavioral tendencies by CSs:

-Managerial factors affect selection of location. At the time of selecting location, decisions that oppose the conventional concept of neighborhood may be made for the sake of managerial success.

-Managerial factors facilitate sharing of physical environment. The chief purpose of that

includes cutting costs of building environment and maintenance, realization of unique learning styles, securing income sources through building good relationships with local communities and successfully renewing the Charter.

-Educational factors affect selection and acquisition of building. Especially for CSs with their own particular learning styles, the nature of the learning styles and the nature of the building are closely connected.

-Relations with other organizations in building environment are embodied in the form of cooperation rather than competition.

-Sharing environment is a common practice. The purpose is either managerial gain or educational gain or both.

As mentioned above, we verified that CSs, in building environments for activities, have different viewpoints and processes from those of conventional public schools. It can be said that, with liberalization in operation and education, CSs are building environments with completely different viewpoints to survive the world of free competition.

8. Future Development

We selected CSs that were set up a few years ago as the objects of our case studies. Continuous research is required to follow the whole process from opening of CSs through to their closure to observe their changes, development and sustainability.

This study can be positioned as the basic research of the analytic phase in a series of CS environment studies to present a proposal for a problem-solving program to a new school system incorporating characteristics of CSs when it is introduced in Japan. In an attempt to contribute to the development of school reforms currently underway in Japan, our planned goal is to design a blueprint that supports the building of an environment for a Japanese version of Charter Schools taking into consideration Japan's own situations and circumstances.

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<http://members.jcom.home.ne.jp/charter-center/>

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-U.S. National Center for Education Statistics   <http://nces.ed.gov/ccd>

[Footnotes]

i) For example, the "Community School Initiative" - one of the 17 proposals for changing the educational system compiled by a private consultative body under the Prime Minister, the National Commission on Educational Reform - and the idea of setting up special districts for structural reforms fostered by the Koizumi administration.

ii) CSs in the U.S. were first institutionalized under a Minnesota state law in 1991. Since then the new system of publicly run schools has spread throughout the nation. Based on Charter School Laws enacted by states, schools need to receive "Charters" to be set up. Though stipulations of the laws more or less differ depending on the state, the purposes of the system that can be applied to all CSs generally include raising the degree of freedom of education by allowing volunteer teachers and guardians among others to set up and operate schools in accordance with their concepts, to deregulate contents of education, to realize diverse public education and give students freedom of school selection, and thereby to

respond to students' needs that the conventional education system could not cope with.

iii) In 1998 in Japan, an NPO "Japanese version charter school promotion center (headquartered in Kanagawa Prefecture)" was set up with the goal of creating the CS system in Japan, followed by other private organizations with similar goals. Besides the Center, political factions and parties, such as the Democratic Party of Japan, are considering drafting a Charter School bill.

iv) In the long run, the relationship between education programs and physical environments could determine the course of management whether successful or not. But for this study, we consider it a different factor in our analysis setting it apart from potential element that impacts school management

v) Joe Nathan, Karen Febey, *Smaller, Safer, Saner Successful Schools*, University of Minnesota Hubert H. Humphrey Institute of Public Affairs Center for School Change, July 2001

vi) Center for Education Reform, Washington D.C., February 1999

http://edreform.com

The Center ranked the CS laws of 38 states based on criteria including content and degree of deregulation regarding CS, eligibility of Charter applicants, allocation of budget, support programs, number of CSs allowed, number of CSs currently under operation. The effectiveness of laws is indicated as "strength of CS laws" in A, B, C, D and F. Rank A is "strong", B "modestly strong" and C and below "weak". The three states we selected are evaluated as A, B and D.

vii) Common Gateway Interface. A technology to process data on a web server that it received via browser and send them back to the browser. It allows web sites to have complicated functions that HTML programs alone cannot process, such as sending answers to questionnaires and displaying the results.

viii) A state-by-state mailing list subscribable on web site "U.S. Charter School" by an organization affiliated with the U.S. Department of Education.

ix) CA is known for its unique purpose and method of learning. Its purpose of learning is to master practical knowledge and techniques through learning activities using local communities. The distinctive programs that it is currently operating in cooperation with external organizations include the housing construction program and the drama program. Students at CA are mainly youngsters aged 13 or older who could not adopt or were dissatisfied with regular public school education. (Core age groups are between 16 and 18)

x) MN is known for its unique project-based learning method. Students proactively design a project and select subjects, such as mathematics, that must be learned to implement the project. Therefore, there are no conventional classrooms in the school. Individual students

mainly spend their time at school at their desks and whenever it is necessary they go out to do research. The outcome of this method grabbed the media spotlight and, as a result, nationwide attention. Students are aged between 12 and 18.

xi) The definition of experience in changes in physical environment here is experience of changes in physical environment, such as school building and schoolyard, including construction, expansion, refurbishment and moving.

xii) Calculated based on Graph 3.11 and other descriptive answers.

xiii) Thereafter "environment" in this context indicates physical space and structures, such as school building and schoolyard, where children can play.