

**Otto Salomon beyond Swedish history of education:
Implications for current developments in technology
education at the compulsory school**

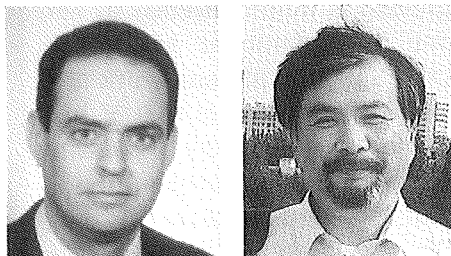
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1. Background and conceptual basis

In previous works we have intended to be consequent with the tenet that in educational research meaningful contributions could be made through a combination of thorough review of current stage of knowledge and an insightful study of previous developments in the different subjects concerned (Moreno, 1998; Yokoyama & Yoshitome, 2000). We have largely found support in an early work by Travers (1969); analysing the history of educational ideas he notices that education has often *moved through cycles of ideas, only to return, ultimately, to the starting point*. We share with Travers the criterion that a better understanding of historical contributions will remarkably avoid what he calls the *rediscovering of the wheel* in educational research.

Otto Salomon (1849-1907), the developer of the so call *educational sloyd* (slöjd) and the "Nääs system", belongs, together with Ellen Key and Per Henrik Ling, to the Swedish educationist having a major impact on international education. Main questions we try to answer in this paper are what was the core of his international success? What implications do his contributions has for current trends on technology education at the compulsory schools? The paper initially focuses on the man and his background. The context of his work is in the following examined in connection to the socioeconomic

conditioning that we pose to educational development. We further analyse the system he created as an argument to the first stated question. Finally, the heritage of Salomon and the revival of his ideas at international level are discussed in search for answer to the second question previously presented.

2. Otto Salomon (1849-1907), the individual and the beginning of his educational work

A review of Salomon's background is indeed needed in order to understand his work. Otto Salomon's life and work are deeply connected to that of his uncle, the wealthy Swedish businessman of Jewish origin, August Abrahamsson. In 1868 Abrahamsson bought Nääs, an estate not far from the city of Gothenburg. Abrahamsson was married to the Swedish opera singer Euphrosyne Leman; both were convinced philanthropists. After the early death of Euphrosyne in 1869, Abrahamsson decided to devote his fortune to education and called upon his nephew to carry out the enterprise (Moreno, 1997; Reincke, 1995; Thorbjörnsson, 1990).

In a study of Salomon's life and work, the Swedish sloyd historian Hans Thorbjörnsson (1990) refers to the peculiar issue that Salomon neither pursued formal pedagogical studies nor had a background as a craftsman. This fact has been later used as argument to explain the uniqueness of his contribution in the field of practical aesthetical education (Moreno, 1998). Traditional working methods in craft were not directly related to Salomon's personal experience and the opportunity he had of getting in contact by himself with the works of classic educationists, provided him the possibility of a whole individual processing of educational ideas and making an original implementation.

Previous researches on history of sloyd education commonly recognise that the main sources of Salomon's ideas were Cygnaeus, Pestalozzi, Fröbel, Comenius, Locke, Rousseau, Salzman and Spencer (see, e.g., Bennett, 1937; Hartman, 1994; Reincke, 1995; Thorbjörnsson, 1990). The relation of Salomon with the Finnish educationist Uno Cygnaeus was of particular importance for



Figure 1. Otto Salomon (1849-1907)

his pedagogical work (see, e.g., Salomon, 1892; 1904).

The decade of the seventies, in the nineteenth-century was an intensive period in Salomon's work at Nääs. In February 1872, the sloyd school for boys was founded. This is considered to be the first full practical educational experience of Salomon; prior to this there is just but a reference to his temporary work as assistant to the teacher at the parish school of Nääs, a position that he left after a very short period due to conflicts regarding methods of teaching (Cabezas, 1893). Why particularly a school for sloyd? Bennett (1937) argues that the opening of this school was a result of Solomon's early ideas related to the importance of sloyd instruction for citizenship education. We argue further on this issue in the next section.

Subsequently, in 1874, the Euphrosyne Abrahamsson School for girls was opened on the same basis as the one for boys. A common feature of these two schools is that sloyd was taught by craftsmen¹⁾. In 1875, Salomon founded the school for sloyd teachers (Nääs Seminarium) in an attempt to fulfil the needs of competent sloyd teachers. The school initially worked in close relation to the school for boys. Sloyd until this period had been developed on a utilitarian basis. According to Bennett (1937) Salomon's plan was still to turn intelligent artisans into sloyd teachers through pedagogical formation. A radical change took place after his visit to Cygnaeus, in Jyväskylä, during 1877. From Cygnaeus he received the idea that sloyd should be organised on a pedagogical basis and found the inspiration he needed to work out his own system for sloyd education (Bennett, 1937). After 1880 the school for boys became a center for the pedagogical practice of teacher trainees at Nääs Seminarium. The sloyd schools for boys and girls at Nääs were closed in 1888 due to the intensive activity that the Sloyd Seminarium demanded from Salomon. From January 7 to February 10, 1878, the first course for school-teachers was organised (Bennett, 1937); this date marks an essential change in the whole character of the Seminarium; it finally acquired a complete pedagogical dimension. In 1882 the artisan training courses were discontinued and the teachers' courses became the main activity of the Seminarium (Thorbjörnsson, 1990).

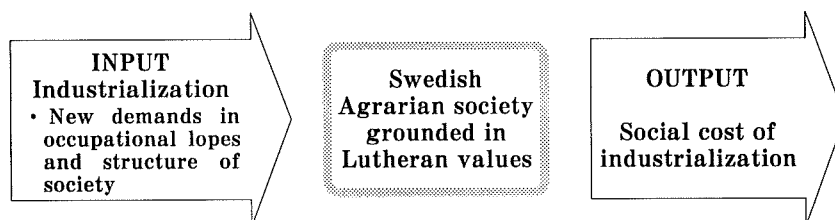


Figure 2. Industrialisation and the impact on Swedish society (after Moreno, 1999, p. 93).

1) In the sloyd school for boys the teacher was Alfred Johansson, who later became internationally well known through his work related to the Nääs series of models. The girls were taught, from about 1878, by Finnish female teachers from Jyväskylä who were sent to Nääs by Cygnaeus (Thorbjörnsson, 1990).

3. Why particularly sloyd? The socioeconomic context of Sweden in the late 19th century

In our approach to the history of this subject the socioeconomic perspective on educational development and the process of academic establishment in the terms presented by Goodson (1988) has become theoretical frames of reference. The stages of the process of academic establishment, i.e. invention, promotion, legislation and mythologization, are connected to climates of opinion which we consider framed by the socioeconomic development. Assuming this conceptual framework while analysing Salomon's contribution from invention to mythologization of sloyd, the socioeconomic environment in which he developed his work, that is the period of early industrialisation in Sweden, had an essential role.

The invention of sloyd by Salomon has been previously placed in the context of a society deeply based on Lutheran values suddenly faced with an increasing industrialisation as illustrated in figure 2. The outputs from this meeting in terms of social problems are considered to be at least threefold: (a) increasing concentration of the population in cities, (b) change in social consciousness from producers to consumers, and (c) the decay of the so call home industries (Moreno, 1999).

Let's argue further on this issue. Since ancient times in Sweden and other Nordic countries, the people in the rural areas used to spend considerable time at home. It became a custom on winter evenings for the whole family to gather around the fireplace to perform some form of useful craft activities. Bennett describes a typical Nordic home scene in the following terms:

The father and the sons, with a few simple tools, would work in wood, making axe halves, hammer handles, rakes, pins for yokes, and other devices needed for farm use; also benches, tables, forks and spoons (for the silver ones, if possessed, were used only on Sundays), and other useful household articles, often ornamenting them with simple carving. Meanwhile the mother and the daughters were spinning and weaving, knitting, and sewing the clothing for the family. As a fitting accompaniment to these fireside industries they would sing ballads and hymns or repeat favorite selections from their native sagas. (Bennett, 1937, p. 53)

Bennett (1937) also describes the traditional strong discipline and demand for exactness in home sloyd activities, which to some extent were later transferred to sloyd education. The development of home sloyd culture resulted into what has been called domestic industries (Blachford, 1961). Families or individuals started to sell the surplus of the home-made products. As a result of the growth of this market it often happened that certain villages became famous for particular kinds of work, and ...every boy in the neighbourhood was brought to work at that branch of handiwork which then acquired the character of a winter trade (Bennett, 1937, p. 54).

The arrival of the industrialisation had a negative impact on social activity

in its widest sense. Various researchers had critically look at this period in Swedish history (Andersson, 1970; Derry, 1979). The increasing industrialisation bringing greater competition and increased activity in the labour market is considered responsible of the breaking down of the system of domestic industries. The growth of forestry and iron industries demanded a considerable number of workers. Bennett (1937), Thorbjörsson (1990) and Reincke (1995) agree that home sloyd almost disappeared, as it was cheaper to buy ready-made articles. They also notice the increasing pleasing novelty about factory-made articles, which again points at a change of mentality from producing to consuming. Industrialisation brought also a notable increase of other social problems. The negative social consequences of industrialization are presented by Andersson in the following terms: *The second half of the nineteenth century...brought with it the overwhelming impact of industrialisation, and it was this economic development that was chiefly responsible for Sweden's vicissitudes during the last hundred years* (Andersson, 1970, p. 351). This historical period is also characterised by large emigration of Scandinavians to the United States.

Our earlier questioning, Why particularly sloyd?, seems to have an answer in the context above described. The social problems coming with the industrialization became a major concern both for the government and the Lutheran church. We have earlier discussed that these problems exceeded what would be possible to accomplish within the traditional approach to social life and education in the Lutheran church (Moreno, 1998, 1999). Individual responsibility, salvation through enlightening by working at the level of the people in the small parish community, and combined responsibility for the state and the church under direct influence of teaching Christianity, which Mallison (1975) calls "Lutheran way", was not suitable to face the new challenges. The works of Salomon found a fertile soil and a positive social attitude towards manual work. The climate of opinion indeed guaranteed the starting of the process of establishment of the subject. Its introduction in the school was socially supported on the basis of been an important means to give discipline, to strengthen the character and to provide useful skills; all of them important Lutheran values at risk.

Is worth mentioning here that in other contexts, both for similar and different reasons the claim for practical-aesthetical education was also increasing.

4. Salomon's didactical system; the know-how internationally needed

The conditions for invention and promotion of sloyd as school subject were already existing. The mastership of Salomon then entered in action in the educational Arena. Salomon successfully combined the theoretical grounds from his readings of classical educationist with the experiences he acquired in the sloyd schools at Nääs. This gave him the unique possibility of building his system through a continuous enriching link between theory and practice. The seventies and early eighties of the 19th century were a period of deep studies of the classics and consolidation of his pedagogical thought, which followed a

process of continuous improvement almost until the last year of his life, 1907.

Salomon's processing of former educational ideas resulted into a system so call the "Nääs system", which unfortunately has largely been reduced to the "series of sloyd models"²⁾. Previous studies coincide in pointing out that the series of models were just but the visible part of a bigger holistic system (Hartman, 1994; Reincke, 1997; Moreno, 1998; Thorbjörnsson, 1995). We have operationalized Salomons's system as illustrated in Figure 3.

The *children* became the core of Salomon's didactical system; the development of the entire human being's capabilities is in focus. The grounds of the introduction of sloyd in the school are after all educational in character. The *principles* in the didactical system developed by Salomon are to be assumed as guidelines for the whole activity in the subject. He classified these principles as *general* and *special*, they are to a great extent a result of the processing of influences from earlier developments in education where the contributions from Comenius and Froebel are noticeable (see, Salomon, 1892). From them Salomon assimilated the systemic character of the teaching and learning process; the need to guarantee an initial basic level of knowledge and abilities in order to transit to more advanced stages in the development of the individual. The principle that *the instructor should be a teacher not an artisan* is an expression of influences from Cygnaeus; these demand establishes a clear

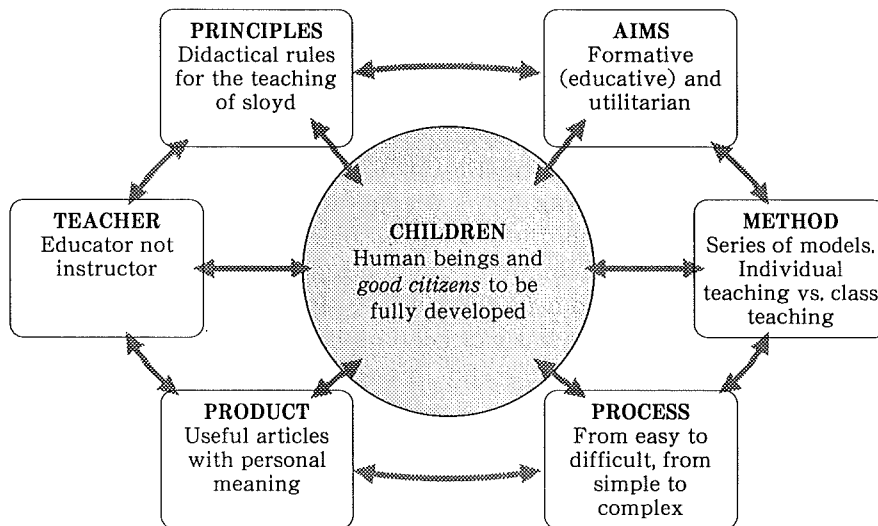


Figure 3. The didactical system of Otto Salomon for sloyd education (after Moreno 1998, p. 50).

2) "Series of sloyd models", are list of articles to be made by the children organized in a systemic way with and increasing demand in the amount and level of the skills requested for making it. Salomon stressed its temporary character but the easy way it provided for teachers to organized the teaching might be one of the reasons for its long influence within this subject's domain.

distinction from the vocational training and fully establishes the educational character of sloyd.

Regarding *aims* Salomon focused in the educational dimension. *Many, perhaps most people, never get an opportunity of doing a dovetailing, but every human being, man or woman, may from it acquire the habit of doing well whatever he is called upon to do* (Salomon, 1895, p. 252). His hierarchical structuring of the aims of the subject reflects the priority given to the educative dimension of the activity in relation to the utilitarian one. Salomon defines teaching *method as a regular and rational proceeding to attain a certain end* (Thorbjörnsson, 1992, p. 9). He advocated for individual teaching in sloyd. In *The theory of educational sloyd* a whole chapter is devoted to the discussion of class teaching versus individual teaching (see Salomon, 1892). Salomon considered class teaching to be *not good either in sloyd or any other subject. The more individual our teaching becomes, the nearer...it approximates to a good educational ideal* (Salomon, 1892, p. 63). In Salomon's works about the use of methods in sloyd education there is a continuous claim to subordinate them to the individual characteristics of children. The need to provide individualised teaching adjusted to every pupil's capabilities became a tenet in his didactical system.

Salomon attached paramount importance to the process of work in sloyd; it is ultimately during the practical activity that the aims of the subject are reached. For him sloyd work could not be mechanical, and all along the process the thinking powers of children must be trained. The motivation is given an important role as a basic condition to guarantee the concentration, attention, accuracy and other elements needed during the sloyd process (Thorbjörnsson, 1992). *The true stimulus to attention, we have said, is interest; the greater the interest, the greater the attention* (Salomon, 1892, p. 45).

Salomon established a methodology of three stages for the teaching and learning of sloyd; each of them giving a different character to the working process of children. These stages start from a reproductive activity up to what in the present context could be considered problem-solving or creative activity.

The value given to the *product* as an expression of the development of children's personality is one of the qualitatively new features incorporated by Salomon to the previous experiences of practical education. *The objects which the child makes are equally useful with those of the carpenter; but, unlike the work of the carpenter, the value of the child's work does not exist in them, but in the child that made them* (Salomon, 1892, p. 2). Salomon attributed a personal meaning to the product made by the children.

The *teacher* is considered the element on which the functioning of the whole system is based. After his visit to Cygnaeus the development of the conceptions in regard to the role of the sloyd teacher became one of the most fast-growing elements in the educational work of Solomon; the whole Seminar changed in character in just a few years (Bennett, 1937; Cabezas, 1893). In *The theory of educational sloyd* a whole chapter is devoted to the discussion of the educative role of the teacher versus the negative influence of artisans in

the teaching of the subject (see Salomon, 1892). With regard to this question Salomon stresses that ... *There is no doubt that if sloyd is to be a means of education, the teacher must be an educator.* As for the argument that the technical skills of the artisan are greater than those of the teacher, he states that *from a sloyd point, the amount of technical skill is not of so much importance, inasmuch as education, and not skill, is aimed at* (Salomon, 1892, p. 69).

The former arguments show a total maturity of his educational contribution. In summary invention and promotion of the subject were accomplished; the grounds for the mythologization of the subject, the establishment of the canon of what the subject should include was also laid. The didactical system created by Salomon became the password for the subject to successfully irrupt, in the Nordic countries and world-wide, as an important component of the school curriculum. The mythologization of sloyd in terms of the tremendous influence of the system described above became later on a hindrance to the further development of the subject. After Salomon's death in 1907 and up to the 1950s no main changes were implemented in the system he had created and the subject started a process of decay.

When Salomon started his intensive activity of spreading world-wide the system he have developed, he found a tremendous acceptance. In the late nineteen and beginning of the twenty century practical-aesthetical education at international level was just looking for what Salomon had created and thoroughly tested at Nääs. His system meet two basic social needs at that time: to provide a system of basic skills further on needed in working life, and to provide a holistic education to the individual. In 1880, the first foreign teacher attended the courses at Nääs Seminarium; until 1917 about 1700 teachers and educational officials from 39 different countries (including Cuba and Japan) attended the sloyd courses. According to Bennet (1937) Nääs became the *Mecca* for teachers from all progressive countries interested *in getting the latest and best in educational handwork.* From the eighties of the 19th century untill almost a decade after Solomon's death, Nääs engaged in an increasing international activity.

5. The decline and renewal of Salomon's influences.

The international declines of the influences of Salomon's ideas on international education have been further analysed in previous works (Endo, 1987; Hartman, 1994; Eyestone, 1992; Moreno, 1997, 1998; Reincke, 1995; Throbjörnsson, 1990, 1995). Summarising, the arguments used to explain this phenomenon are at least threefold. (a) The increasing of pragmatism and other educational trends which highly emphasised on creativity and individualization in the learning process; sloyd was not anymore the only source available. (b) The lack of initiative of the followers of Salomon at Nääs, causing that the view of a sloyd stop in time transcended internationally. (c) Socioeconomic changes in the different countries bringing with a considerable disregard for the educational systems and particularly practical education an expensive area.

Salomon ideas and contributions to practical education rested for long in silence in the educational discourse in this field. In the nineties of the last century a renewal of his ideas, a critical review of his contributions and influences in international education started. From different perspectives and different context his work has been again in focus. We might ask why in this particular times? One argument is the fact that there has been an important change in trends in the historical research in the field of practical-aesthetical education, a move from the historiographic approach that largely prevailed in the subject towards a critical one (see, e.g., Kantola, et al, 1998; Moreno 1998, 1999; Reinke, 1995)

We argue that the changes in social demands in connection to working life can also be a factor conditioning this going back to the roots in search for answer to "new-old problems". Salomon developed the educational sloyd in the period of transition from agrarian to industrial times. His system was designed to meet new needs and solve new problems at that time. Despite controversies on the issue it is widely accepted that we are nowadays, at least in the so-called developed world, faced to the transition from modernity to post-modernity, from industrial to post-industrial times. Post-modernity is considered to be already our today's social context (Lyon, 1999; Schienstock & Koski, 1997). What is to be learned from Salomon is a question arising for scholars in different contexts. Yes, indeed as a Swedish scholar described "the sloyd of Salomon was a product of its time" (Hartman, 1994). Though one might to some extent question the validity of some of his contributions in today's context, what from our perspective is definitely valid is the methodological path he opened for the subject to deal with social demands and the didactical structuring he created. There is still a debate going on, particularly within the Nordic academic community, between the concept sloyd and technology education. We support that a worthy approach will be to focus on likenesses rather than in differences. In a different context and with new problems to face Technology education and sloyd are nowadays in move that definitely fits to the system created by Salomon more than a century ago.

6. Concluding remarks

While assessing the impact of Salomon beyond Swedish history of education and its implications for current developments in technology education the following factors are to be considered.

The humanistic character of sloyd; the fact that the individual was put as the centre of the subject and not the technical know-how. Sloyd education was thus given a distinctive character in comparison to previous experiences in field of practical-aesthetical education. Salomon's system, as we have previously described, fulfilled the demand of a holistic education aimed at fostering all the capabilities of the individual and at the same time providing a preparation highly relevant for the future working life and the needs of the industrial society.

The vacuum existing in practical-aesthetical education at international level

in the second half of the nineteenth century indeed favoured the spreading of sloyd. On this regard the skills of Salomon in developing international contacts is due to be acknowledged. He managed to create a successful network with active feedback process between his activity in the seminar at Nääs and teachers around the world. For us who have had the possibility to go into parts of his extensive correspondence becomes an overwhelming experience of how a fruitful exchange between a community of professional can be arranged. Even in our ICT society we still have not been as efficient and systemic as he was in creating a flow of information for the development of the subject.

Another factor explaining the international success of sloyd was Salomon strategy of making continuous plea to adapt sloyd education to local conditions. We can find particular expressions of sloyd like the Cuban sloyd, Japanese and American sloyd as a result of this perspective. Salomon's emphasis on the need for continuous improvement of the system he created is also of relevance for understanding his success at that time and why his work still remains influential in this field.

The value of Salomon's contribution and his influences can not be assessed from in a lineal reproductive perspective. Thorbjörnsson (1992, p. 22) quotes Salomon himself referring, already in 1903, to the system he created in the following terms "...there is not any further need of a "Nääs system" in the dominion of Manual Training. May it die and may it rest in peace! I will not be found among the mourners." We consider ourselves neither "mourners" nor advocators of bringing back historical experiences in education without a thorough critical assessment. Our intention is rather to simply prevent scholars in the field from "rediscovering the wheel". Salomon still has more to say of value for current discourse in sloyd and technology education.

If we scholarly study today's society, the demands it poses on educational system and the subject technology education in particular, having an understanding of the methodology once followed by Salomon, we will be contributing to his legacy in practical aesthetical education and doing a meaningful work for further developments. We are pleased to notify that colleagues in the whole of Scandinavia, Germany, UK, USA and other countries have already started to notice this path.

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Note

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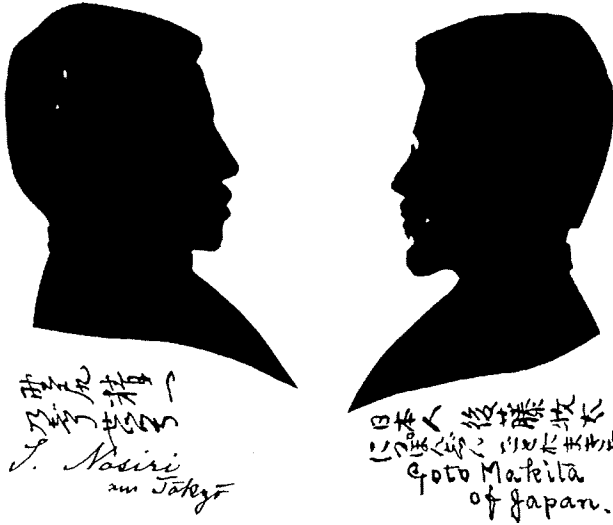
Acknowledgement

Pictures of Nääs seminarium in those days are shown at the end of this paper. These pictures have been kindly supplied by Hans Thorbjörnsson (Nääs museum).

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abstract

Otto Salomon (1849-1907) belongs, together with Ellen Key and Per Henrik Ling, to the group of Swedish educators who have had a major impact on international education. He developed the so-called *educational sloyd* (slöjd), a subject introduced in schools world wide at the end of the 19th and beginning of the 20th century. What was the core of his international success? What implications do his contributions have for current trends in technology education at compulsory schools? This paper explores the historical context and the particularities of the didactical system he developed, attempting to provide ground for understandings why his work remains a milestone in this field.



Seiichi Nosiri and Makita Goto were sent to Nääs seminarium by Japanese Government in August-September, 1888.

TOKYO EDUCATIONAL MUSEUM.
 東京教育博物館

Uyeno Park, Tokio, Japan June 5th 1886

Dear Sir,

I beg to say that in accordance with your kind offer as to teach the manual work to our teacher at your school, I made the suggestion to the Minister of Education to that effect and the result is that Mr. S. Kojiri one of the graduates of Imperial Normal School has been ordered to learn your manual work course, after he should pursued his three

years' course at a German Normal school. He expects to start Japan for Germany in next week and would probably write you after his arrival. He speaks both German and English and is known as a very intelligent young man and any special attention shown to him while at your school will be very much appreciated by me.

I am Dear Sir,
 yours faithfully

S Tegima

Aug. Abrahamson Esq.
 Director of Normal School

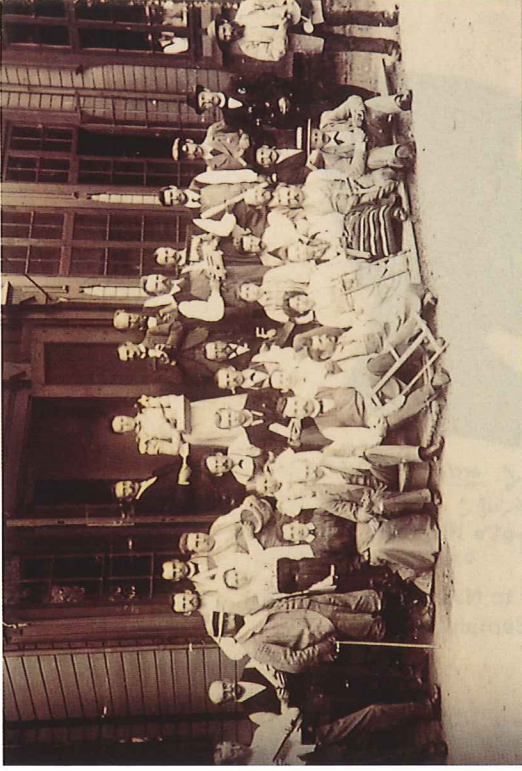
A letter from Seiichi Tegima (Director of Tokyo Educational Museum) to August Abrahamson 5. June, 1886.



① Lecture by Otto Salomon (1903)



③ Wood work course (about 1895)



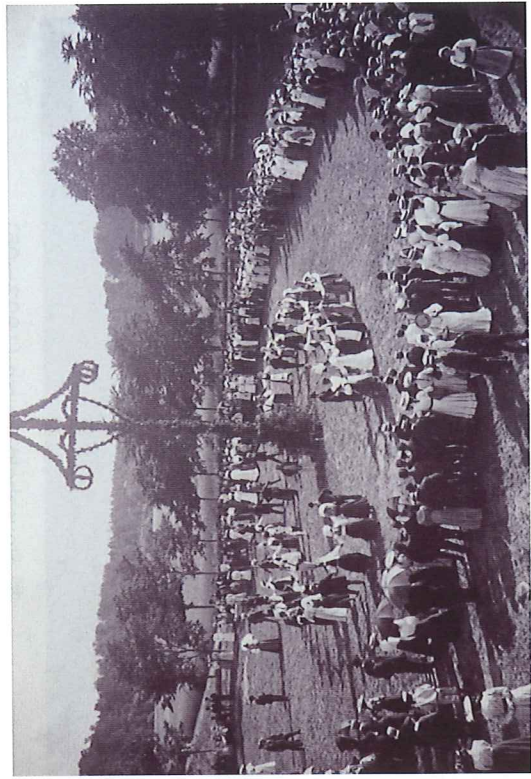
② Sloyd course (1895)



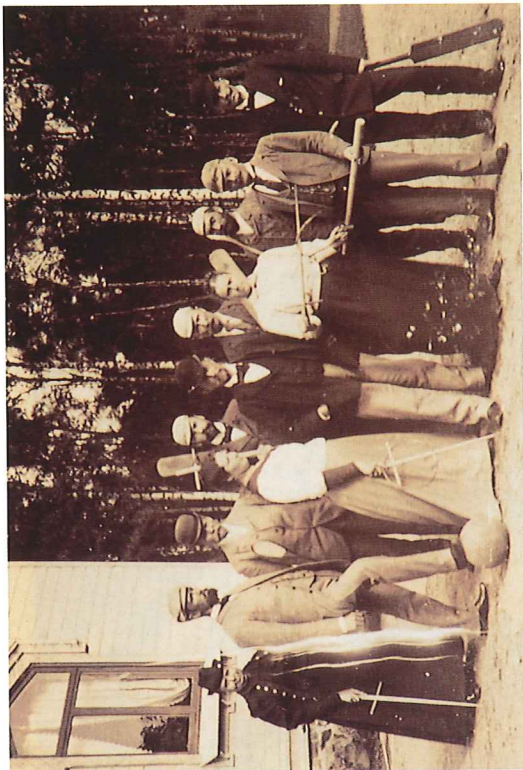
④ Textile course (1914)



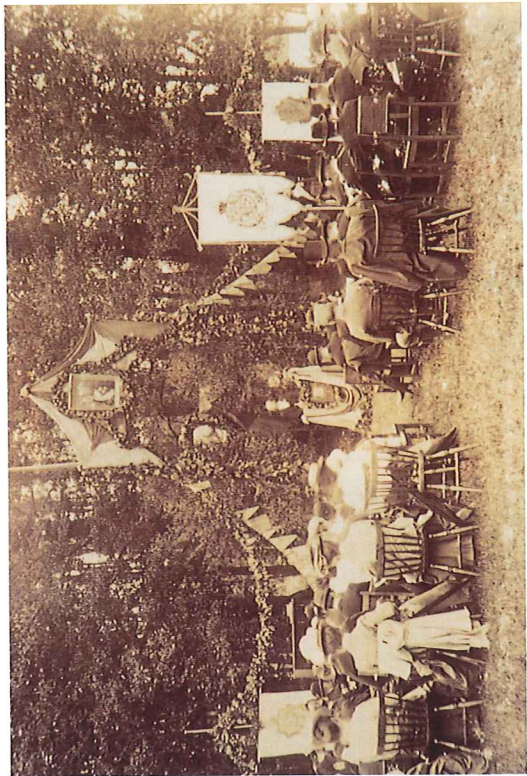
⑥ Dinner Room (about 1900)



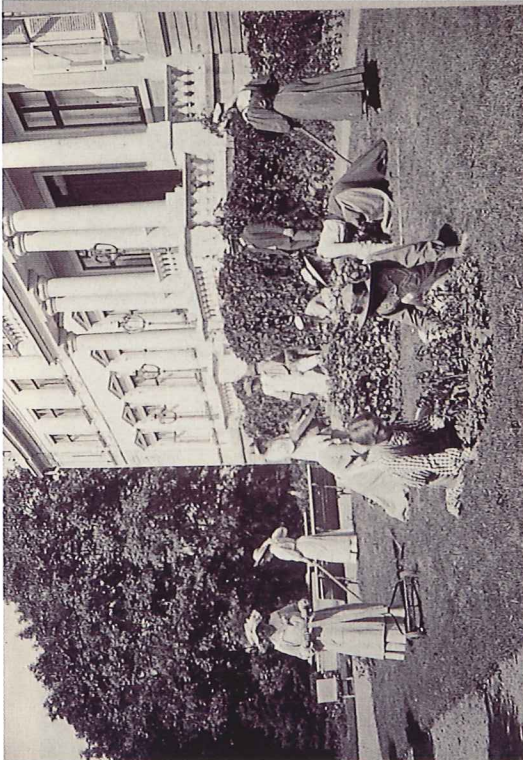
⑧ Midsummer Day (1906)



⑤ First play course (1895)



⑦ Midsummer Day (1897)



⑨ Gardening course (about 1910)



⑩ Household course (1903-05)



⑪ Card board Sloyd course (1911)



⑫ First metal course (1914)