

379
N81
No. 1757

AN ANALYSIS OF THE WORK OF PESTALOZZI IN
EDUCATION AND HIS PHILOSOPHY
CONCERNING PRACTICAL ARTS

THESIS

Presented to the Graduate Council of the
North Texas State College in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

180019

Leland Oliver Kay, B. S.

Port Arthur, Texas

August, 1950

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Statement of the Problem	
Purpose of the Study	
Delimitations	
Definitions of Terms	
Source of Data	
Recent and Related Studies	
II. THE EXPERIMENTS OF PESTALOZZI AT NEUHOF AND STANZ.	6
Pestalozzi's Experiment at Neuhof	
Pestalozzi's Experiment at Stanz	
III. THE EXPERIMENTS OF PESTALOZZI AT BURGDORF AND YVERDON.	20
Pestalozzi's Experiment at Burgdorf	
Pestalozzi's Experiment at Yverdon	
IV. AN ANALYSIS OF PESTALOZZI'S EDUCATIONAL PROGRAM FOR PUPIL DEVELOPMENT WITH SPECIAL REFERENCE TO THE PRACTICAL ARTS.	40
V. SUMMARY AND CONCLUSIONS.	47
Summary	
Ultimate Aim of Education	
Psychology of Learning	
Curriculum Pattern	
Methods of Instruction	
Conclusions	
Pestalozzi's Democratized Education	
Pestalozzi's Psychologized Education	
Pestalozzi's Idea of Organic Education	
The Concrete Always Preceding the Abstract	
Grading of School Subjects	
New Devices of Method	
Pestalozzi's Revolutionized Discipline	
Pestalozzi's Influence on Teacher Training and Study of Education as a Science	

CHAPTER I

INTRODUCTION

At the mention of Pestalozzi's name, one is reminded of the famous novel, Leonard and Gertrude,¹ in which Pestalozzi portrayed the social order of Switzerland in the latter part of the eighteenth century. The story was of a nobleman living in a large house who was the ruler and, to all intents and purposes, the owner of all the land and villages about. Under him was an appointed overseer or bailiff who supervised other various divisions of labor. As in other organizations there was always room for graft and bad practices of all types. Thus one sees the different classes from the wealthy land owner down to the tradesmen and laborers who were usually the poorest in any such organization.

The social divisions of the occupants of the village were similar to most divisions in Central Europe at the time Pestalozzi wrote Leonard and Gertrude. In this book he attempted to show the graft of the bailiff, the crookedness of the innkeepers, the poverty of the lower class of inhabitants, and the sinful living of the people in general. These lower-class families were almost to the point of

¹Johann Heinrich Pestalozzi, Leonard and Gertrude, translated and abridged by Eva Channing.

starvation at times. The homes were poor, and little was obtainable for the comfort of the occupants.

Leonard and Gertrude was written in 1781, when Pestalozzi was thirty-five years old. Pestalozzi was a mature man at the time he wrote this book. He was able to understand clearly the problems of the time, and through this book he endeavored to convey his ideas concerning education to the people.

In early life Pestalozzi spent a few weeks each summer with his grandfather, Andrew Pestalozzi, who was the pastor in a small village. It was during these visits that Pestalozzi found out about the realities of the life of the poor and their sufferings. From that time on Pestalozzi had a desire to improve the horrible living conditions of the lower classes of people.

It was natural, therefore, that when the time came for him to choose a profession, he selected the ministry. He prepared himself for the ministry and preached for a short time, but his thoughts had been drifting in another direction to such an extent that he gave up the ministry and began to study law. Along with his law studies he wrote articles for a local paper which soon branded him as a dangerous revolutionary. His chances for an appointment to public office were then gone, so he again turned in another direction seeking an opportunity to help the poor. Pestalozzi chose agriculture as his next venture. He spent a year with an

expert agriculturist at Kirchberg near Berne. It was here that he worked out his own plan for growing madder and vegetables. In 1786, he purchased fifteen acres near the village of Birr and soon increased this acreage to one hundred acres. His agricultural venture soon ended in failure as did all his other undertakings.

Pestalozzi, still desiring to help the poor, decided that only those who were in a position to help themselves could be helped. He decided that the first step towards an improvement in the living conditions of the People should be the proper education of the people. Pestalozzi, in his efforts to help improve the conditions of the poor, chose teaching as his next occupation.

Statement of the Problem

This was a study to analyze the work of Johann Heinrich Pestalozzi in the field of education and his philosophy concerning the practical arts.

Purpose of the Study

The purpose of this study was to ascertain and analyze the following: What was Pestalozzi's philosophy concerning practical arts? What effect did his method of teaching have on the education of Europe during his time? How did his experiment at Neuhof influence education of his time? How did his experiment at Stanz influence education? How did his experiment at Burgdorf influence the method of education?

How did his experiment at Yverdon influence education? What was his method of teaching elementary education? Why did educators come from other countries to study the methods of Pestalozzi? How did his object lessons change the methods of education? Why did he think that work should be correlated with school subjects? Why did he believe that sense-impressions were the foundation for instruction?

Delimitations

The study was limited to the work of Pestalozzi in the field of education, both elementary and advanced, and his philosophy concerning practical arts.

Definitions of Terms

"Work" is the efforts exerted by Pestalozzi toward his field of interest, his energy put forth in the development of his ideas and beliefs in regard to the changing of instruction of the schools of his day.

"Education" is a systematic training of the mental and moral faculties starting from birth and being directed along the proper channels so that the child may realize and enjoy the full advantages of life.

"Philosophy" is the theory, beliefs, ideas, practices, conceptions, and work of a person that reflects his ideas and ideals.

"Practical arts" applied to trade, work, and labor and included such vocations as farming, dairying, weaving, and spinning.

Source of Data

The information for the study was secured from books, periodicals, encyclopedias, and other professional literature concerned with the life, work, and philosophy of Johann Heinrich Pestalozzi.

Recent and Related Studies

A survey of the available literature failed to reveal any recent studies concerning Pestalozzi's philosophy with special reference to the practical arts. The available literature discussed the influence that Pestalozzi has had on modern education.

CHAPTER II

THE EXPERIMENTS OF PESTALOZZI AT NEUHOF AND STANZ

Pestalozzi's Experiment at Neuhof

Pestalozzi was determined to achieve the great ambition and desire of his life by trying to help the poor through the education of their children. In this way he felt that it would be possible to relieve the misery, suffering, and sin of the world. "His thoughtful experiments with his son had suggested new principles of education which seemed to him to be particularly fitted for the regeneration of the poor children."¹

After observing his son for several months, Pestalozzi made the following statement concerning what he thought was logical reasoning:

Struck by the child's natural need of continual activity, and by the abundance and versatility of its physical, intellectual, and moral faculties, it occurred to him that by guiding all these powers aright, and by varying work in such a way as to prevent fatigue, it would be possible not only to teach children to earn their bread, but to cultivate their intellectual and moral nature at the same time. He thought, too, that a country life, in which the cultivation of the land was combined with some sort of handicraft, would provide the best means for teaching the poorest children that by their own strength, and with God's help, they

¹Charles Bennett, History of Manual and Industrial Education up to 1870, p. 111.

are capable not only of satisfying their own wants, but of contributing to the happiness of their family and country.²

Pestalozzi thoroughly believed that this was the only way of relieving the misery of the poor, and he longed to demonstrate how it could be done effectively.

In the winter of 1774, Pestalozzi began to put his theory to test with about twenty children who he brought into his home. Some of the children who were gathered for his first experiment came from neighboring villages and some were vagrants picked up from the roadside.

He clothed them, fed them, and treated them in every way as his own. They were always with him, sharing in the work of the garden, in the fields, and the house, and in bad weather spinning cotton in a large outhouse. Very little time was given to actual lessons; indeed the children were often taught while working with their hands, Pestalozzi being in no hurry to teach them to read and write, convinced as he was that these are useful only for those who have learned to talk well. He gave them constant practice in conversation, however, on subjects taken from their everyday life, and made them repeat passages from the Bible till they knew them by heart.³

This first experiment seemed to be a complete success. In a few months the physical appearance of the children had undergone a complete change. They looked strong and robust, and their faces wore an expression of cheerfulness, frankness, and intelligence which could not be detected in any of their expressions when they first arrived. There is evidence

²Roger DeGuimps, Pestalozzi, His Life and Works, p. 52.

³Ibid., p. 54.

that considerable progress was made with their manual work, as well as the lessons that were connected with it. All of the children had the highest praise for the kind care and patience shown them by their teacher.⁴ The year of 1775 was spent by Pestalozzi in teaching and caring for these children.

The cost of the experiment, even though it was on a small scale, was far beyond what Pestalozzi could gather in money. The work of the children failed to provide the proper cultivation of the land as he had hoped. Although more children were anxious to take part in the experiment, it was impossible for Pestalozzi to increase his experiment without new domestic arrangements and increased expense.

The news of Pestalozzi's experiment and the results that were evident spread throughout the land. Many of those who were capable of understanding and appreciating what he was trying to do offered him money to carry on the experiment. Some of these interested people encouraged Pestalozzi to appeal to the friends of humanity for help to extend his undertaking and to make it a complete success.

Pestalozzi did not hesitate in accepting this advise. In 1776, he placed his appeal in the weekly newspaper. In this appeal he made the following statement with reference to handwork:

⁴Ibid., p. 55.

I appeal to the friends and benefactors of humanity to help me maintain an institution which I can no longer maintain alone.

I have for a long time thought it probable that, under favorable circumstances, young children might be able to earn their own living without undue labor, provided that enough capital were advanced to organize an establishment, in which they would not only live, but at the same time receive a certain elementary education. I consider that any careful experiment in this direction would be of the highest importance to humanity.

I have proved that it is not regular work that stops the development of so many poor children, but the turmoil and irregularity of their lives, the privations they endure, the excesses they indulge in when the opportunity offers, the wild rebellious passions so seldom restrained, and the hopelessness to which they are so often a prey.

I have proved that children, after having lost health, strength, and courage in a life of idleness and mendicity, have, when once set to regular work, quickly recovered their health and spirits, and grown rapidly. Such is the effect of altered circumstances, and the absence of disquieting influences.

I promise that if I succeed in getting this help, I will abandon every other occupation, and devote my whole time and strength to the education of the poor friendless children. I promise that the number of the children shall be regulated by the financial support I receive. I promise to teach them all to read, write, and cipher; I promise to give all the boys, so far as my position and knowledge will allow me, practical instruction in the most profitable methods of cultivating small plots of land, to teach them to lay down pasture land, to understand the use and value of manures, to know the different sorts of grasses, and the importance of mixing them; the nature and use of marl; the effect, still disputed, of the repeated application of lime; the management of fruit trees, and perhaps of a few forest trees. All this will come naturally out of the work connected with the actual needs of the house, and will not be a special study calling for increased expense. It will be the household needs, too, that will give the girls an opportunity of learning gardening, domestic duties, and needlework.

The chief occupation in bad weather will be cotton spinning.

I undertake to furnish all these children with suitable food, clothing, and lodging, and have already made many of the necessary alterations and arrangements in my house.

I promise to give the most conscientious attention to their religious instruction, and to do all I can to put gentleness and purity into their hearts.⁵

Pestalozzi promised to give a yearly account of the progress of his experiment, and he asked that it be inspected so that no money would be given if his promises were not found to be faithfully performed.

In one of his reports to the Berne Agricultural Society in 1778, Pestalozzi included a statement about each of the thirty-seven children that were in his school. Concerning the ability of the children such statements as these were made:

He seems to have a good disposition; he is intelligent, strong and useful in the fields; he is attentive, a good weaver, and is beginning to write fairly well. He is a healthy boy, strong, and accustomed to working in the fields; the best weaver in the house; is beginning to write a little, and likes French. He is quick in everything, but ill-mannered and uncouth. Admitted three years ago in a state of utter ignorance, but very intelligent. Now she spins, reads, and writes fairly well, likes singing, is principally engaged in the kitchen.

In this report Pestalozzi speaks of getting very valuable help in the management of the establishment and the care of the children from a Miss Spindler of Strasburg "who is both highly gifted and of untiring activity." Then he adds, "I have, besides, a master to teach spinning,

⁵Bennett, Op. Cit., pp. 112-13.

and two good spinners; a man who winds for the weavers and teaches reading at the same time; and two men and two women who are almost always employed on the land.⁶

About this time, Pestalozzi increased the number of children in the school, hoping in this way to improve the financial condition of his experiment, but his problems multiplied instead. In 1780, after five years of experimentation and desperate struggle, Pestalozzi was forced to abandon his efforts. Pestalozzi was very incapable as a financial manager, and before he realized it he was so far in debt that it took not only his own but the greater part of his wife's property to satisfy his creditors. His home and an acre or two of land were all that he was able to save. Some of the reasons for his failure were as follows:

1. He had no legal agreement with parents, and sometimes they would take their children away as soon as they were well clothed.

2. He attempted to carry out his experiment on too large a scale and involving too much technical knowledge and skill, especially in spinning and weaving.

3. He did not select his children with reasonable protection for the success of the institution. Some were so deficient that, physically or mentally, there was no possibility of their earning their living.

4. He was unable to prevent the spread of contagious diseases in his household.

5. He was not a successful organizer and business man.

6. He was trying to solve what is regarded as an unsolvable problem--to enable the average child to earn a good living and a tuition for a high type of education by the labor of his own hands during the years when he is receiving instruction.⁷

⁶Ibid., p. 113.

⁷Ibid., p. 114.

All of these reasons clearly outline the weak points that existed in Pestalozzi's experiment.

Pestalozzi was well aware of the fact that the five years his experiment was in operation had brought him economic failure. Yet, he was not ready to admit that the principles upon which he operated his experiment were wrong. On the contrary, he was more convinced than ever that the fundamental truths on which he had based his undertaking were right.

Pestalozzi's Experiment at Stanz

Following the failure of his experiment at Neuhof, Pestalozzi turned to writing. The book that brought him the most recognition was Leonard and Gertrude. In this book Pestalozzi hoped to get his educational ideas before the people so that they would be accepted and the school system would be changed in order to help the poor children get an education and to improve the overall condition of the country. Although the book was accepted as an enjoyable novel, the intended lessons went unheeded. However, the theories advocated in this book were brought into practice in the later experiments that Pestalozzi was permitted to perform.

In 1789, the young Republic of France set to work to refashion its elder sister, Switzerland. Resistance was easily overcome, and the independence of the confederated

states crumbled and fell. Oligarchical governments, special privileges, and a host of rights, customs, and prejudices disappeared. These things had hampered the liberty and equality of the citizens. The Swiss Republic was set up with a Directory of five members.

Pestalozzi soon became a strong supporter of the new government because he thought that the educational reforms he had advocated could be brought about, and their possibilities would have a chance to be proved. He believed that the new rulers would accept his ideas because they were interested in the well-being and happiness of the people. With this idea in mind, he quickly published several pamphlets. His chief purpose was to advocate harmony, union, a swing away from the past, and cooperation with the new government. By doing this, he received recognition from some of the members of the Directory. They listened to his ideas and philosophy of education and decided that he should be permitted to put them into operation. Plans were being drawn up when, on September 9, 1789, a revolution broke out at Stanz. By the time the French soldiers had quieted all resistance, the district had been practically destroyed, leaving many homeless and many orphans.

The Directory decided at once to do something for the children who were made orphans by the catastrophe. They decided to found an orphan's home at Stanz, making use of the outer premises of the women's convent and part of the large

field that joined it. Pestalozzi had a great desire to be a father and a teacher to these orphans, and he submitted a plan to the Directory that was warmly recommended by three members. On December 5, 1789, the Directory issued a decree, the principal clauses of which were as follows:

The immediate control of the poor-house at Stanz is entrusted to citizen Pestalozzi.

Children of both sexes, taken from among the poorest, and especially from the orphans in the Stanz district, will be received in it and brought up gratuitously.

Children will not be received before the age of five years; they will remain till they are fit to go into service, or to learn such a trade as could not be taught them in the establishment.

The poor-house will be managed with all the care and economy that such an institution requires. The children will gradually be led to take part in all work necessary for the carrying on and support of the establishment. The time of the pupils will be divided between field work, house work and study. An attempt will be made to develop in the pupils as much skill, and as many useful powers as the funds of the establishment will allow. So far as it is possible to do so without danger to the industrial results which are to be aimed at, a few lessons will be given during the manual labor.⁸

On the fourteenth of January, 1799, the first of these orphans were received at Stanz, and a few days later the number had increased to fifty. It was so important to come to the rescue of these unfortunate children that the buildings were not even ready when they were admitted. The children were in a terrible physical condition. Some were covered with vermin, sores and diseases of all types. They also brought with them deplorable habits and inveterate vices. The great

⁸DeGuimps, Op. Cit., p. 133.

responsibility of managing the house and watching over the cleanliness, health, and education of these children was left to Pestalozzi and one woman servant.

In less than a month there were seventy-two children taking part in the experiment. Accommodations were provided for about fifty, and the remainder of the seventy-two children went home at night. Some visitors came to inspect the experiment to make reports to the Directory. Words of praise were common in their reports concerning the splendid job that Pestalozzi was doing. Some others, however, were quick to criticize because Pestalozzi was deviating from the pattern by which they themselves were formed; then, there were the dissatisfied people of the community who felt that the school was being operated by the new government to win their children over to the new and hated constitution. The community was entirely and exclusively Catholic, and they did not like the idea of a Protestant educating their children.

The Directory would not allow any one to interfere with the way that Pestalozzi was conducting his experiment. They left him with complete liberty of action. In a letter sent to Minister Rengger, Pestalozzi gave the following account as to how the schedule was being divided among the various activities:

The hours of work and study are now fixed as follows: from six to eight, lessons; then manual work till four in the afternoon; then lessons again

till eight. The health of the children is excellent. The difficulty of combining work and instruction grows less every day; the children are slowly learning to be orderly, and to apply themselves. You can imagine how much trouble it has been to bring these neglected little mountain children as far as this. We are only the more pleased at having reached our end.⁹

Pestalozzi was happy about the success his method of instruction was achieving for his experiment.

Many difficulties and strong opposition hampered Pestalozzi, but the undertaking prospered. Some of the children were sad, weary, timid, and weak on arrival at Stanz; others were bold, distrustful, apathetic, and rebellious. They changed to a group comparable to the transformation of nature from winter to springtime. The children became eager, active, understanding, gentle, and kind.

In the spring of 1799, changes in the war brought the French troupes back into the canton. Many of the troupes were either sick or wounded, and a hospital had to be established. Unfortunately, the French Government agent could find no other suitable place for a hospital but Pestalozzi's orphanage. On June 8, 1799, sixty of the children were sent away to homes that were found for them; and with only twenty children left in the establishment, Pestalozzi decided not to continue the experiment. This brought to an end the short experiment at Stanz.

⁹Ibid., pp. 140-41.

In writing to a friend, Pestalozzi stated as follows concerning his experiences at Stanz:

I had observed for a long time that behind their coarseness, shyness, and apparent incapacity are hidden the finest faculties, the most precious powers; and now, even amongst these poor creatures by whom I was surrounded at Stanz, marked natural abilities soon began to show themselves. I knew how useful the common needs of life are in teaching men the relations of things, in bringing out their natural intelligence, in forming their judgment, and in arousing faculties which, buried, as they were, beneath the coarser elements of their nature, cannot become active and useful till they are set free. It was my objective then to arouse these faculties, and bring them to bear on the pure and simple circumstances of domestic life, for I was convinced that in this way I should be able to form the hearts and minds of children almost as I wished.

I tried to connect study with manual labor, the school with the workshop, and make one thing of them. But I was the less able to do this as staff, material, and tools were all wanting. A short time only before the close of the school a few of the children had begun to spin; and I saw clearly that, before any fusion could be effected, the two parts must be firmly established separately--study, that is, on the one hand, and labor on the other.

But in the work of the children I was already inclined to care less for the immediate gain than for the physical training which, by developing their strength and skill, was bound to supply them later with a means of livelihood. In the same way I considered that what is generally called the instruction of children should be merely an exercise of the faculties, and I felt it important to exercise the attention, observation, and memory first, so as to strengthen these faculties before calling into play the art of judging and reasoning; this, in my opinion, was the best way to avoid turning out that sort of superficial and presumptuous talker, whose false judgments are often more fatal to the happiness and progress of humanity than the ignorance of simple people of good sense. And I am more than ever convinced that as soon as we have educational establishments combined with workshops, and conducted on a truly psychological basis, a generation will necessarily

be formed which, on the one hand, will show us by experience that our present studies do not require one-tenth part of the time or trouble we now give to them.¹⁰

This letter indicates that Pestalozzi had given great thought and work to the experiment. His philosophy had begun to show up in his great teaching.

The conclusions to be drawn from this experiment at Stanz have been summed up by Morf. He studied Pestalozzi with the greatest care and intelligence and wrote the most complete biography that has been published on this philosopher of education. His conclusions regarding the Stanz experiment are as follows:

1. Man's knowledge must be founded on sense-impression. Without this basis, it is but empty verbiage, fraught with more danger even than ignorance for the future happiness of man.

2. Each branch of instruction must start from a point which is within reach of the child's earliest powers. From this point he must be led forward by a chain of ideas so carefully graduated, that he is able to reach each successive link by his own strength.

3. The method and means of instruction must be made so clear and so simple as to be capable of adoption by all mothers and teachers, no matter how little talent or education they may have. In no other way can we look for any large diffusion of enlightenment amongst the people.

4. In each branch the child must be exercised in the simplest elements till he is entirely master of them, and it must be the same for every step that adds anything new to what is already known. Wherever this principle is not faithfully observed, there can be no true intellectual culture, but merely a confused knowledge, which must remain barren.

¹⁰Bennett, Op. Cit., pp. 115-116.

5. Teaching must be addressed to the whole class, and not merely to each individual child; the chief means for this is to make the whole class repeat the master's words in chorus. In this way everybody is occupied, nobody remains inactive, all are compelled to take part in the common work.

6. Time or rhythm, which men find so useful in any combined work or game, must also be observed in this exercise. It prevents the confusion which would result from a large number of voices, and strengthens the impression made by the teaching.

7. With this method of instruction, children can practice writing and drawing, even while they are being taught other things. In this way they train their hand and eye, and begin to form their taste. Pestalozzi employed slates for this purpose, on which the children wrote with pencils of the same material. The advantages of this latter innovation, which was due to Pestalozzi, and has since rendered so much service in elementary schools, are its cheapness and the ease with which writing can be rubbed out and corrected.¹¹

A true understanding of Pestalozzi was expressed in the foregoing summary. Yet, many people failed to grasp the real importance of the educational program that Pestalozzi so desperately tried to establish.

¹¹DeGuimps, Op. Cit., pp. 171-172.

CHAPTER III

THE EXPERIMENTS OF PESTALOZZI AT BURGDORF AND YVERDON

Pestalozzi's Experiment at Burgdorf

Just as soon as Pestalozzi had begun to regain his health which had failed him at Stanz, he lost no time in trying to get back to his work. His work, the raising of the standards of the people by education, was so important to him that he did not want another long period of inactivity such as he had experienced between his Neuhof experiment and his Stanz experiment. Pestalozzi was now fifty years of age, and no time could be lost if he wanted to get his methods into operation.

Pestalozzi went to the small town of Burgdorf in the canton of Berne where he offered his services free. He wanted an opportunity to teach the children of one of the primary schools. This request was at first refused, and one can hardly wonder why.

The only real success that Pestalozzi had achieved up to this time was his publication of Leonard and Gertrude. His practical experiments had been of a very short duration, and nothing had been left behind to give the public a favorable idea of his talents. For this reason, the public was reluctant to accept him.

There were two men, however, who understood what was behind the work of Pestalozzi, and they interceded in his favor. Through their influence, permission was obtained for him to teach in a little school in the lower part of Burgdorf that was established for children of non-Burgesses parents.

The school had seventy-three children at this time. Their only teacher was a shoemaker by trade who taught the children at his home and practiced his trade at the same time. They were being taught the customary subjects of the day.

Towards the latter part of July, 1799, Pestalozzi was entrusted with about half of these children. His method of instruction followed closely the experiment that he used at Stanz. He used no books, required no memory work, abandoned the Catechism and Psalms, had nothing to prepare or write, and had no questions to answer. Their principal exercise was to repeat after Pestalozzi all his words in unison while, at the same time, drawing anything on their slates that they desired.

Samuel Dyslie, the other teacher, could not bear the thought of having this stranger teach in his school and at the same time introduce a system of instruction that was entirely different from his own. He complained to the parents and easily succeeded in alarming them to the extent that the authorities transferred Pestalozzi to one of the Burgess schools.

Pestalozzi was given a class of youngsters ranging from five to eight years of age. This was called a preparatory class. In telling what he did for this group, Pestalozzi described his methods of instruction in these words:

I once more began crying my A B C's from morning till night, following without any plan the empirical method interrupted at Stanz. I was indefatigable in putting syllables together and arranging them in a graduated series; I did the same for numbers; I filled whole notebooks with them; I sought by every means to simplify the elements by reading and arithmetic, and by grouping them psychologically, enable the child to pass easily and surely from the first step to the second, from the second to the third, and so on. The pupils no longer drew letters on their slates, but lines, curves, angles, and squares.¹

Pestalozzi was happy to be able once more to teach the poor children. He worked extremely long hours but never seemed to tire because he was so interested in his work.

Pestalozzi had been teaching at this school for eight months when, in March, 1800, the annual examination was given. The results of this examination were stated in a letter by the Burgdorf school commission. This letter resulted in the first public sign of approval given to Pestalozzi's method which was soon to acquire so great a reputation. The commission praised the work of Pestalozzi for the quick advancement of his students.

The commission was so pleased that they notified him that he would be moved to a higher grade so that his methods

¹Ibid., p. 176.

could be expanded and brought before more highly trained students. They described his method as one that would make the task of future schoolmasters much lighter.

It was in this second class that Pestalozzi continued his experiment in May, 1800. In this class he failed to obtain as much success as had crowned his efforts in the lower grades the winter before. Pestalozzi's method was at that time exclusively and excessively elementary; it dealt with human knowledge in its simplest forms and was intended for quite young beginners.

About this time Pestalozzi's health began to fail as it had at Stanz. This was very disappointing in that Pestalozzi felt his hopes of accomplishing his goal would once more be ruined. Providence, however, came to Pestalozzi's rescue by sending him a helper, Herman Krusi, who was conducting a school of his own at Appenzell. The two schools were united with the consent of the Executive Council, and as much of the Castle of Burgdorf as Pestalozzi needed, as well as garden space, was granted for the school. Thus a school was formed where the poor children and children of well-to-do families were taught under the same roof.

During the following summer holidays, Krusi went to see one of his friends about joining the staff at Burgdorf. As it was apparent by this time that more help was needed at Burgdorf, Krusi met with success and secured the services of Tobler and Buss. Krusi's account of the masters with

whom the Bergdorf institute opened was as follows:

Our society thus consisted of four very different men, brought together by a strange combination of circumstances; the founder, whose chief literary reputation was that of a dreamer, incapable in practical life, and three young men, one a private tutor, whose youth had been much neglected, who had begun to study late, and whose pedagogical efforts had never produced the results that his character and talents seemed to promise, another a bookbinder, who devoted his leisure to singing and drawing, and the third a village schoolmaster, who carried out the duties of his office as best he could without having been in any way prepared for them. Those who looked on this group of men, scarce one of them with a home of his own, naturally formed but a small opinion of their capabilities. And yet our work succeeded, and won the public confidence beyond the expectation of those who knew us, and even beyond our own.²

This confidence was made evident from the very start by public testimony to the value of Pestalozzi's work.

The Commission, that had been appointed by the Society of the Friends of Education to make frequent reports on the work of Pestalozzi, made the following report on October 1, 1800:

The first thing that we noticed was that Pestalozzi's children learn to spell, read, write, and calculate quickly and well, arriving in six months at results which an ordinary village schoolmaster would hardly bring them in three years.

It is true that schoolmasters are not generally men like Pestalozzi, nor do they find assistants like those of our friend. But it seems to us that this extraordinary progress depends not so much upon the teachers as upon the methods of teaching.

And what is this method? It is a method which simply follows the path of Nature, or, in other

²Ibid., p. 204.

words, which leads the child slowly, and by his own efforts, from sense-impressions to abstract ideas. Another advantage of this method is that it does not unduly exalt the teacher, inasmuch as he never appears as a superior being, but, like kindly Nature, lives and works with the children, his equals, seeming rather to learn with them than to teach them with authority.

Who does not know how ready the youngest children are to give everything a name, to put things together, and then take them apart again for the sake of new combinations? Who does not remember that he liked drawing better than writing? Who does not know that the most unlearned men are often the quickest at mental calculations? Who is ignorant that children, boys and girls, almost as soon as they can walk, delight in playing at soldiers, and in other forms of exercise?

It is on these simple and well known facts that Pestalozzi bases his method of instruction. Were it not for the fact that other men are daily making the same mistakes as teachers, we should be inclined to ask how it is that this idea never occurred to anybody before.

The report goes on to speak of the use of movable letters for spelling and reading, slates for writing, and visible objects for teaching the children to count, and mentions that singing and walking often take the place of the regular lessons. It concludes as follows:

So far as we have been able to judge, it is impossible to grasp the general idea of the method without having followed the exercises from the beginning. It results from what we have said that Pestalozzi's system ought to be introduced into the whole of Switzerland; the advantages of such a step would be incalculable. Pestalozzi's earnest desire is that he may be able, with the help of his worthy collaborators, to make his method generally known, and instruct all schoolmasters in its use. The Commission cannot but join heartily in this desire, and would urge the Society to use all its influence towards enabling Pestalozzi to found in Burgdorf a normal school for primary teachers, to which, for the practical preparation of the pupils, a model school would be attached.³

³Ibid., pp. 205-206.

This report made it possible for Pestalozzi's system to be more generally known and accepted, and its spread became inevitable.

As a direct result of this report, Pestalozzi was able to achieve another of his goals. He was able to persuade the Society of the Friends of Education to allow him to attach a normal school to his institution at Burgdorf. It was on October 24, 1800, that Pestalozzi announced the opening of his educational institution in the Castle of Burgdorf with a normal school for teacher training attached. Of all the establishments that he founded, this was the one in which his views were most fully realized and which bore the most unmistakable stamp of his original genius.

In the first years of the Burgdorf institute nothing that resembled a systematic plan of lessons was followed. The whole life of the place was simple and homelike. Just a big family living together and learning together.

One day a peasant, the father of one of the pupils, came to visit the establishment. He was very much surprised at what he saw. He made the following comment:

"Why, this is not a school, but a family."
 "That is the greatest praise that you can give me," answered Pestalozzi, "I have succeeded, thank God, in showing the world that there must be no gulf between the home and the school, and that the latter is only useful to education in so far as it develops the sentiments and the virtues which lend the charm and value to family life."⁴

⁴Ibid., p. 210.

The children of Burgdorf trusted their masters, and their love and gratitude for them took the place of rules and harsh discipline. There were no rewards and, except on rare occasions, no punishments, and obedience was perfect because it was spontaneous. The children were happy, and they liked their lessons, games, and work.

It was at Burgdorf that Pestalozzi's sense-impression lessons in natural history began. Great interest was developed in the long walks where the children's attention was drawn to the many plants and minerals along their way. This created an interest in the children to want to find out about plant and mineral development. Great enthusiasm was created in these useful lessons. This type of instruction played a large and useful part in all of Pestalozzi's establishments.

By this time, the reputation of the institute was spreading; the leading newspapers of the district gave it great recognition; the number of pupils continued to increase, and before long, the applications of additional pupils wishing to attend had to be turned down due to the lack of space.

Many visitors, including several very distinguished men, were attracted to Burgdorf through the publicity it had received. Charles Von Bonstetten was one of these distinguished visitors, and he made the following comments

about the institution:

I cannot understand why Pestalozzi should say that all instruction is based on three chief elements--number, form, and language; but what I do see, and see clearly, is that his forty-eight children, of ages varying from five to twelve, have learned, in from six to ten months, writing, reading, drawing, and a little geography and French, and have besides made marvelous progress in arithmetic. They do everything cheerfully, and their health seems perfect. I know not whether Pestalozzi's method is good, nor whether, indeed, he has any reasoned-out method, but I see plainly that he is walking in unknown ways, and arriving at hitherto unknown results, and that, after all, is the most important consideration.

The children know little, but what they know they know well. In my opinion, there could be nothing better than the Burgdorf school for children of eight or nine. But it will not bear fruit till upon this basis and in the light of this experience a new story has been added to the edifice.

The children are very happy, and evidently take great pleasure in their lessons, which says a great deal for the method.⁵

Pestalozzi believed that children should learn to work in school so that the experience would not only be of economic value, but it would give valuable sense-impressions. Pestalozzi recognized the fact that "doing leads to knowing."⁶

Pestalozzi believed that all instruction should follow after the knowledge of number, form, and speech had been mastered. "He realized that in considering any objects one must observe: (1) how many, (2) how they look--what is their

⁵Ibid., p. 213.

⁶Bennett, Op. Cit., p. 120.

form and outline, (3) what they are called--how one can recall each to mind by means of a sound, a word."⁷ Pestalozzi decided that instruction must proceed in this manner. Drawing became one of the fundamental studies in his school as a means of form study. He gave considerable attention to the development of an alphabet of form. Pestalozzi made the following comments about drawing:

But drawing, as a help towards the end of instruction, making ideas clear, is essentially bound up with the measurement of forms. When to a child an object is given to draw, he can never use his art as he should, that is as a means of rising through vague sense-impression to clear ideas in all his education, until he can represent the proportions of the form, and express himself about them; nor can his art have that real value that it might and should have, were it in harmony with the great purpose of education.

Thus in order to found the art of drawing, we must subordinate it to the art of measuring and endeavor to organize as definite measuring forms and divisions into angles and arcs that come out of the fundamental form of the square, as well as its rectilinear divisions. This has been done; and I think I have organized a series of such measuring forms. The use of which makes the learning of all measurements and the proportions of all such forms easy to understand, just as the A B C of sounds make the learning of language easy.

This A B C of form, however, is an equal division of the square into definite measure-forms, and requires an exact knowledge of its foundation--the straight line in a vertical or horizontal position.

These divisions of the square by straight lines produce certain forms for defining and measuring all angles, as well as the circle and all arcs. I call the whole the A B C of form.

⁷Ibid., p. 120.

This should be presented to the child in the following way:

We show him the properties of straight lines, unconnected and each by itself, under many conditions and in different arbitrary directions, and make him clearly conscious of the different appearances, without considering their future use. Then we begin to name the straight lines as horizontal, vertical, and oblique; describing the oblique line first as rising or falling, then as rising or falling to right or left. Then we name the different parallels as horizontal, vertical, and oblique parallel lines; then we name the principal angles formed by joining these lines, as right, acute, obtuse. In the same way we teach them to know and name the prototype of all measure-forms, the square, which rises from joining together two angles, and its divisions into halves, quarters, sixths, and so on; then the circle and its variations, in elongated forms, and their different parts.

All these definitions should be taught to the children as results of measuring with the eye, and the measuring forms named in this course as square, horizontal or vertical oblong (or rectangle); the curved lines as circle, semi-circle, quadrant; first oval, half-oval, quarter-oval, second, third, fourth, fifth, and so on. They must be led to use these forms as means of measuring, and to learn the nature of the proportions by which they are produced.

As soon as the child draws readily and correctly the horizontal line with which the A B C of form begins, out of the whole chaos of objects seen and shown we try to find figures whose outline is only the application of the familiar horizontal line, or at least offers only an imperceptible deviation from it.

Then we go to the vertical line, then to the right angle, and so on. As the child by easy application of these forms becomes stronger, we gradually vary the figures. The results of these measures (which agree with the natural physical mechanical laws) on the art of drawing are as remarkable as those of the A B C of form upon the art of measuring. While in this way the children before they proceed farther bring to perfection every drawing, even the first beginning drawing, a consciousness of the result of perfected power is already developed in them, in the first steps of this art; and with this consciousness are also developed an effort towards perfection and a perseverance towards completion, which the hurly-burly

caused by the folly and disorder of our unpsychological men and methods of art education never attempts nor can attempt.

The foundation of progress in children so taught is not only in the hand; it is founded on the intrinsic powers of human nature.⁸

Pestalozzi believed that children who were taught by this method would gradually gain in power of expression through drawing. He had his students use their ability to draw in penmanship and in nature study. In teaching geography he had the children make clay models of the land formations that were observed.

Pestalozzi decided, also, that the only true way to teach arithmetic was by sense-impression. He had the following to say in regard to teaching mathematics by his sense-impression method:

All arithmetical calculation consists in increasing or decreasing numbers by various methods which are simply intended to shorten the repetition of the formula: one and one are two, one from two is one. But these abbreviations, which are all that is learned in the school, have the disadvantage of becoming a mere matter of memory, and of destroying the intuitive conception of number. Thus we may have learned by heart that four and three are seven, and feel that we have reached a certain definite result; but this result is not really ours, we have accepted it on trust, possibly without even knowing what the number seven represents. Without sense-impressing exercises the child can know nothing of numbers themselves; he can only know their names, and these may remain entirely without meaning for him for a long time.

For these exercises Pestalozzi first employs his "table of units," in which each unit is represented by a line, so that up to a hundred the child can make all operations of addition, subtraction,

⁸Ibid., pp. 120-121.

multiplication and division, as it were by sight. And so afterwards, when he works in his head, he has a clear and exact idea of the numbers he uses, because he always thinks of them as collections of lines, and sees the numbers themselves instead of the conventional figures which represent them.

Then comes the "table of fractions," which was composed of squares, some whole, others divided horizontally into two, three, or even ten equal parts. From this the child learned by sense-impression to count these parts of the unit, to form them into wholes, etc.

Then comes a "table of fractions of fractions," in which the squares were not only divided horizontally, but vertically, so that the method of reducing two fractions to the same denominator was self-evident.

In all these sense-impressing exercises on numbers, it is chiefly the attention, observation, and judgment of the child which are brought into play, and which, with a little help from the master, teach him to find out for himself what he has to learn, and state it in his own words. It would be a great mistake to see nothing but an exercise of memory in all this.⁹

Around this idea, that sense-impression was the only true way of acquiring knowledge, Pestalozzi proceeded in his instruction at Burgdorf to correlate all the subjects, using the sense-impression method of instruction.

Morf, who analyzed the work of Pestalozzi with much care and penetration, states the pedagogical principles of Pestalozzi as follows:

1. Sense-impression is the foundation of instruction.
2. Language must be connected with sense-impression.
3. The time for learning is not the time for judgment and criticism.

⁹Roger DeGuimps, Pestalozzi, His Life and Works, pp. 230-231.

4. In each branch, instruction must begin with the simplest elements, and proceed gradually by following the child's development; that is, by a series of steps which are psychologically connected.

5. A pause must be made at each stage of the instruction sufficiently long for the child to get the new matter thoroughly into his grasp and under his control.

6. Teaching must follow the path of development, and not that of dogmatic exposition.

7. The individuality of the pupil must be sacred for the teacher.

8. The chief aim of elementary instruction is not to furnish the child with knowledge and talents, but to develop and increase the powers of his mind.

9. To knowledge must be joined power; to what is known, the ability to turn it to account.

10. The relations between master and pupil, especially so far as discipline is concerned, must be established and regulated by love.

11. Instruction must be subordinated to the higher end of education.¹⁰

All of these principles clearly outline the pedagogical methods of Pestalozzi.

The Act of Mediation, which was signed on February 19, 1803, re-established Federalism in Switzerland. The unitary government ceased to exist and with it vanished all hopes of future support for Pestalozzi's institution. The work of Pestalozzi was too well known by this time, however, to be easily destroyed. The Swiss Diet instructed a Commission to examine what could be done to help in the fulfillment of Pestalozzi's philanthropic views.

The new government resumed possession of the Castle of Burgdorf and once more made it the residence of the governor of the district. Although the new government did not approve

¹⁰Ibid., p. 241.

of Pestalozzi, who was considered a revolutionary and a friend of unitarism, they did not leave his institution without a home. They let him use an old convent at Munchenbuchsee which was about three miles from Berne. In June, 1804, Pestalozzi left Burgdorf and transferred his institution to its new home.

Pestalozzi's Experiment at Yverdon

Pestalozzi's school was transferred from Burgdorf to Hofwyl, an estate that had been purchased by Fallenberg for the purpose of establishing an educational institution. Fallenberg proposed that he and Pestalozzi work together. Pestalozzi at first accepted but decided after a very short time to dissolve the partnership. Several towns, including Payerne, Yverdon, and Rolle in the canton of Vaud, were anxious to receive Pestalozzi and his school. He decided to accept the offer of the old castle at Yverdon on Lake Neufchatel.

Once the school was set up in the old castle of Yverdon, it grew rapidly; the enrollment was soon much larger than it had been at Burgdorf, and the number of masters was increased. Many of the new masters were former pupils of Pestalozzi at Burgdorf.

Many countries sent representatives to the school so that the method of Pestalozzi might be put into effect in their countries. Some of the countries that sent scholars

to study under Pestalozzi were Prussia, Denmark, Germany, and Holland. There were as many as 150 students and about forty student teachers at the institute at one time.

The studies were almost entirely based on number, form, and language. Language was taught with the help of sense-impression; students were taught to see correctly and in that way to form for themselves a just idea of the relations of things. What was thoroughly understood could be expressed clearly by the students.

The first elements of geography were taught from the land itself since Pestalozzi did not believe in the use of books for this subject. Students were taken to a narrow valley not far from Yverdon where the river Buron and surrounding terrain were studied. Exact details and a complete description of the work of nature were discussed. The scene was reproduced by the student from clay gathered from the valley when they were back in the classroom.

The students had to discover the truths of geometry for themselves. The masters gave them the basic information, and they were left alone to work. The same method was used with arithmetic; however, the children were drilled orally in the use of numbers.

The following schedule was the approximate routine of the average day at Yverdon:

At seven o'clock, after the first lesson, the pupils went to the courtyard. The water,

pumped from the well, ran through a long pipe with holes on both sides, from which each child received a pure, fresh stream, jugs and basins being unknown. After this came breakfast, consisting of soup. Lessons began again at eight. At ten came an interval, when any one who was hungry could get dried fruit and bread from the housekeeper. At mid-day there was an hour's recreation for prisoner's-base on the grass behind the lake. At one o'clock dinner of soup, meat, and vegetables. Lessons again from half-past one till half-past four. Then the afternoon meal, either of cheese, fruit, or bread and butter. Each could take his share away with him, and eat it where he liked during the play hour, which lasted till six o'clock, and which was passed, when the weather was fine, either behind the lake or in the large garden adjoining the castle, where every child had his own little plot. From six to eight more lessons, and then supper, which was much the same as dinner.¹¹

None of the lessons lasted more than an hour, and they were all followed by a short recess during which most of the children changed rooms and instructors. All of these classes were not academic courses; some were lessons consisting of gymnastics or manual labor such as gardening. The last hour of the day was called a free hour and was devoted to anything that the student desired to do. Some of the students used their free hour drawing, reading, writing home, or putting their notebooks in order.

The method of manual work employed in the institute at Yverdon and the various festivals enjoyed by the pupils have been described by DeGuimps as follows:

We know that manual labor had a place in Pestalozzi's scheme; it was often tried at the institute, but never kept up in a regular manner.

¹¹Ibid., p. 269.

The great number and diversity both of the pupils and their occupations proved an unsurmountable obstacle. Gardening met with the most success. Sometimes the pupils had a little patch of their own to cultivate; sometimes they were told off in twos and threes to work for a few hours, under the direction of the gardener. They did fairly well at bookbinding and cardboard work; they also made solids for the study of geometry.

But it was especially on the occasion of the festivals that the greatest demands were made on their skill and judgment.

The end of the year was devoted to making New Year albums to send to the parents, containing drawings, maps, mathematical problems, fragments of history, descriptions of natural objects, and literary compositions. On New Year's day there was a religious service, with a discourse by Pestalozzi; a distribution of presents from the parents; a grand dinner; and in the evening, a torch-light procession through the town (each pupil made his own torch), followed by a ball. For the next few days very little work was done, everybody being occupied in preparing for Pestalozzi's birthday, the twelfth of January. The pupils of each class decorated their room, transforming it into a woodland scene, with cottage, chapel, ruins, and sometimes a fountain, which was so arranged as to play on Pestalozzi's entrance. Fir-branches, ivy, and moss were fetched in large quantities from the neighboring forests, and transparencies, with emblems and inscriptions, were secretly prepared; for the decoration of each room was to be a surprise, not only to Pestalozzi, but to all the other pupils. Songs were also learned in Pestalozzi's honour. The leading idea of most of the inscriptions was: "In the summer you take us to see Nature; today we are trying to bring Nature to you." Often, too, on this day, the pupils gave a dramatic performance, the subject of which was generally chosen from among the great episodes of Swiss history in the middle ages. On these occasions the actors made their own dresses and armour from cardboard and coloured paper.¹²

Pestalozzi used these various activities to develop the skill and judgment of the students.

¹²Ibid., pp. 272-273.

At the end of 1807, the establishment at Yverdon was at its greatest height of fame. At this time it was attracting crowds of pupils, disciples, and visitors from every country. Everyone connected with the institution was filled with joy and hope. One person, however, was dissatisfied. Pestalozzi saw that the establishment was doomed.

Pestalozzi always gathered his entire household together on the first of each year to discuss the events of the past year and the objectives of the coming year. On January 1, 1808, he told his fellow teachers he was worried over the outcome of the establishment due to the fact that there was dissention among them, anger where there should be peace, perdition where there should be salvation, and coldness where there should be love.

The two men who were primarily responsible for this dissention were Niederer and Schmidt. Niederer was always encouraging Pestalozzi, opposing everything that seemed to him a deviation from the principle, but he had no talents for practical questions of administration and discipline and in this respect was of little help to Pestalozzi. Schmidt excelled in teaching mathematics and aroused the admiration of the visitors. He contributed more than anyone else to the reputation of the establishment. He was strong in common sense and had high regard for strict discipline and matters concerning administration. He was practical,

and this was the reason Pestalozzi was so greatly attracted to him.

These two men exercised a contradictory influence on Pestalozzi; each one, naturally, wished to lead him in his own way. Their antagonism had broken up the harmony of the establishment.

Pestalozzi discovered the lack of harmony in his institute at the beginning of 1808. For more than fifteen years he tried to remedy this situation, occasionally gaining momentary success. But the establishment gradually faded out of existence, and Pestalozzi suffered the very misfortune that he had dreaded so much. That was the misfortune of outliving all of his experiments. Although he submitted blindly in the later years of his Yverdon experiment to the will of others and made mistake after mistake, he preserved to the very last his love for the poor and weak ones of the world and the powerful originality of reforming education.

CHAPTER IV

AN ANALYSIS OF PESTALOZZI'S EDUCATIONAL PROGRAM FOR PUPIL DEVELOPMENT WITH SPECIAL REFERENCE TO THE PRACTICAL ARTS

During the time of Pestalozzi, the term "practical arts" had various meanings. It seems that the most accepted definition of the term was to classify it as pertaining to the crafts or trades that required work with the hands. During his time Pestalozzi set forth his views concerning practical arts and attempted to correlate them with other subjects in his various experiments. The following quotation contains his basic philosophy concerning the practical arts:

Struck by the child's natural need of continual activity, and by the abundance and versatility of its physical, intellectual, and moral faculties, it occurred to him [Pestalozzi] that by guiding all these powers aright, and by varying work in such a way as to prevent fatigue, it would be possible not only to teach children to earn their bread, but to cultivate their intellectual and moral nature at the same time. He thought, too, that a country life, in which the cultivation of the land was combined with some sort of handicraft, would provide the best means for teaching the poorest children that by their own strength, and with God's help, they are capable not only of satisfying their own wants, but of contributing to the happiness of their family and country.¹

Pestalozzi had a great desire to help the poor, and the only

¹Ibid., p. 52.

way that this could be done was through the education of their children. By working with the children in the fields, gardens, orchards, forests, and pastures, he saw that academic subjects could be taught while doing this work. Interest could be drawn from the association of the various activities, making them practical and useful. A trade could be learned and practical knowledge gained at the same time.

Pestalozzi advocated that children should be taught while working with their hands. Their interest should be directed toward what they were doing, and studies of related subjects could be drawn into the cycle of conversation, thus creating a greater interest and wider knowledge. He believed that a child would pay more attention and gain more knowledge if his hands were occupied while other things were being presented.

Pestalozzi believed that greater progress could be made in lessons correlated with manual work and more enjoyment could be realized in both. As long as the child could see any connection between what he was studying and working on, a greater interest and a more lasting impression would result. If this were accomplished, the child would receive more benefit from his experience.

"He endeavored to connect study with manual labor, to connect the school with the workshop, and to make them

one thing."² He advocated that study should be centered around manual labor so that the education of the people would be more practical and useful to them. He believed that an education which was not useful was not practical. He reasoned that, by combining the school with the workshops, related studies would become more practical and interest would be greatly increased. The children could be doing something with their hands while learning other subject matter at the same time.

Pestalozzi thought that children should learn to work in school so that the experience would not only be of economical value but it would give valuable sense-impressions. These sense-impressions gained through work, like those gained from the study of objects, became the basis of knowledge. Pestalozzi recognized the fact that "doing leads to knowing."³ He believed that the more experiences a person could have and the more different jobs he could do, the more his basic knowledge was increased. Sense-impressions were the real basis of knowledge according to Pestalozzi.

Drawing was a valuable subject and a means of teaching form by Pestalozzi. He believed that number, form, and

²Bennett, Op. Cit., p. 115.

³Ibid., p. 120.

speech should be the basis from which all instruction should begin, and drawing was his method of teaching form. Children who were taught by this method would gradually gain in power of expression through drawing. Once a child could visualize and represent the proportions of the form of an object and be able to express himself about them, he had realized a means of rising through the vague sense-impressions to clearer ideas in all education.

Children should be allowed to participate in the preparation for celebrations, especially in regard to scenery and costumes according to Pestalozzi. This would give the children a chance to create something for themselves. Pestalozzi believed that great practical knowledge could be gained from doing these things. For celebrations at his various establishments, the children constructed the scenery for their rooms and made torches, costumes, emblems, inscriptions, and cardboard shields. Pestalozzi referred to this type of participation as creative art.

It is by doing all sorts of work at an early age that a man acquires a sound judgment; for if his work is to succeed, the different circumstances under which it has to be done must be thoroughly understood; nor can the child help being struck by the fact that failure results from errors in judgment.⁴

He advocates that sound judgment could be more easily acquired through work. Practical arts connected with the

⁴DeGuimps, Op. Cit., p. 93.

school would give this training so that good sound judgment could be acquired before trying to make a living at an occupation. Different circumstances under which the child could be introduced in a school connected with a workshop would be the best means of encouraging the child to use good sound judgment.

"Nothing makes a greater call on the attention than work in general, because without attention no work can be well done."⁵ Pestalozzi believed that through work with the school, the attention that various occupations require would be gained. All work requires attention, but some types of work, especially highly skilled work, requires more attention.

"Art, practical knowledge, bodily skill, whatever in short enabled a man to make what he has conceived in his mind, is what we call the industrial life."⁶ Pestalozzi was confident that the power of thought and the practical skill of the senses and limbs would achieve this industrial life. All of these, art, practical skill, and bodily skill, combined with regular subjects make up a well rounded education.

"Any particular knowledge or skill is, in itself, of little value as a means of development and education; it is

⁵Ibid., p. 92.

⁶Ibid., p. 374.

by combining and acting on each other that they give harmony to our nature."⁷ Pestalozzi emphasized again that the well rounded education was not complete until the school and the workshop were combined. He believed that one without the other, regardless of which one, would not give a person an education that would prepare him for life to meet most of the problems that life has to offer.

Pestalozzi's philosophy concerning the practical arts has been set forth by Roger DeGuimps as follows:

1. A country life, in which the cultivation of the land was combined with some sort of handicraft, would provide the best means for teaching the poorest children.

2. Children were taught while working with their hands.

3. Greater progress could be made in the lessons connected to manual work and more enjoyment could be realized in both.

4. He endeavored to connect study with manual labor, the school with the workshop, and make them one thing.

5. Children should learn to work in school so that the experience would not only be an economic gain but would give valuable sense-impressions.

6. Drawing is a valuable means of teaching form.

7. By doing all sorts of work at an early age, man acquires a sound judgment.

8. Nothing makes a greater call on the attention than work in general, because without attention no work can be well done.

9. Children should be allowed to participate in the preparations for celebrations, especially in regard to scenery and costumes, so as to develop creative art.

10. Art, practical knowledge, bodily skill, whatever in short enables a man to make what he has conceived in his mind, is what we call the industrial life.

⁷Ibid., p. 381.

11. Any particular knowledge or skill is, in itself, of little value as a means of development and education; it is by combining and acting on each other that they give harmony to our nature.⁸

The foregoing summary of Pestalozzi's philosophy concerning practical arts by Roger DeGuimps may also be found in a book by Charles Bennett, History of Manual and Industrial Education up to 1870.

⁸Ibid., pp. 52-381.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The work of Pestalozzi has been referred to as the common school movement in the field of education. His influence on education spread to many countries through the teachers who were taught his theories, beliefs, and ideas. His philosophy of education may be summed up by a brief explanation of the following: (1) Pestalozzi's ultimate aim of education; (2) the psychology of learning; (3) the curriculum pattern set up by Pestalozzi; and (4) methods of instruction used by Pestalozzi.

Pestalozzi's ultimate aim of education.--The desire to change the horrible condition of existence of the common people led Pestalozzi to take up his life work as an educator and social reformer. He believed that a better education for every individual was the only means of accomplishing this desire and bringing about the needed change. His ultimate aim of education was to insure a happier and more prosperous life for every individual. He hoped to bring about this desired end through the harmonious development of all the powers of the individual.

The psychology of learning.--The inner secret of Pestalozzi's general theory of education has been called

the idea of organic development. Pestalozzi often compared the human development to that of a tree. The human organism, according to Pestalozzi, required a long period of development that made education essential. His main purpose was to discover the laws according to which the body, mind, and heart of the child developed. A harmonious development of these organs must be accomplished in order for the individual to live a normal life and adjust himself to the demands of civilization.

Pestalozzi placed more emphasis upon the growth of power rather than the acquisition of knowledge. He said the effort to force knowledge upon the mind was unnatural and injurious. He, instead, tried to develop the inner capacity of the child so that learning in youth would be a spontaneous process, a result of free activity, and a living and original product. This method would permit the child to acquire the ability to form sound judgment.

The powers of a child begin to grow spontaneously from within when the innate impulses are awakened. Once awakened, these powers strive to unfold to maturity just as an acorn grows into an oak tree. Pestalozzi decided that the same law of organic development operates equally in both. Pestalozzi formed his method of instruction to meet these unfolding powers of the child.

Pestalozzi organized his educational system to match nature. Nature makes no sudden changes but slowly unfolds

whatever is to be produced. He was careful to arrange his subject matter in a series of transitional steps from the easiest to the most difficult. He endeavored to treat each subject in an orderly sequence so the child would readily master each step.

The curriculum pattern set up by Pestalozzi.--The beginning of all kinds of knowledge are found in form, number, and words according to Pestalozzi. From these three starting points, his curriculum for intellectual development was derived. The basic subjects considered by Pestalozzi were mathematics, language, drawing, geography, and music. He emphasized the mathematical and realistic aspects of the curriculum more than other subjects. Religion, morals, manual production, plays, and gymnastics received due attention, but they were not considered forms of intellectual development.

Pestalozzi gave such reasons as these for teaching some of the various subjects:

1. Arithmetic was considered a subject of the highest importance which developed clear and accurate thinking.
2. Language was emphasized as a means of communication and thought and to develop skill in expression of ideas, but it was not used for memory work.
3. Drawing was emphasized as the natural approach to writing. Drawing skill was considered important in developing

the use of points, lines, angles, and curves as another form of expression, and in developing accuracy of observation.

4. Music was considered another form of language.

5. Geography was a valuable study of nature.

Pestalozzi did not consider the use of Mother Goose stories, fairy tales, and literature in his curriculum. He also rejected the study of history. It was utter nonsense to study the by-gone world according to Pestalozzi's way of thinking. The absence of these two phases of training proved to be two grave weaknesses in his efforts to construct a system of education.

Methods of instruction used by Pestalozzi.--Pestalozzi introduced many new methods of instruction. His methods spread rapidly to many countries and changed the style of education in every country where they were introduced.

Pestalozzi used objects in his teaching for the beginning of experiences. He knew that by beginning with objects the child could build up accurate, clear concepts. The art of early instruction depended upon the selection of proper objects for the child's active observation and analysis. Object lessons were used in language, geography, arithmetic, science, and other traditional school subjects.

Sense-impressions, according to Pestalozzi, were the only true foundation of knowledge. This was the basic theory used by Pestalozzi for all instruction. He showed

that the inner, active, and creative forces of the human organism were related to the functioning of the sense organs. Great interest was developed in the long walks, where the children's attention was drawn to the many plants and minerals along the way. This type of instruction played a large and useful part in all of Pestalozzi's experiments.

Work was part of the program in all of Pestalozzi's experiments. He believed that children should learn to work in school so that the experience would not only be of economic value but it would give valuable sense-impressions. These sense-impressions gained through work, like the study of objects, became the basis of knowledge. Pestalozzi taught the children while working in the fields, and enjoyment and benefit were gained in both. Pestalozzi recognized the fact that doing leads to knowing.

Grading of instruction was a most essential principle in Pestalozzi's method of instruction. Pestalozzi decided that subject matter should be treated in the same manner as that used by nature in developing a huge oak tree from an acorn. He endeavored to teach each subject in an orderly sequence so that the child would readily master each successive step.

A typical course of study which was used by Pestalozzi and the time allotted to each subject weekly were outlined

by Eby and Arrowood as follows:

Program for week¹

Lower class:	Nature study	2 hours
	Description of products of art	2 hours
	Geography	2 hours
	Knowledge of country (walk)	2 hours
	Arithmetic (mental)	6 hours
	Drawing	4 hours
	Reading and language	6 hours
	Singing	3 hours
	Religion	6 hours
Upper class:	Natural history	2 hours
	Technology	2 hours
	Arithmetic	6 hours
	Geometry and drawing	4 hours
	Language	4 hours
	Singing	3 hours
	Religion	9 hours

The discipline of Pestalozzi's schools was mild and paternal. He dealt with every infraction by persuasion and personal counsel. Corporal punishment was resorted to only in extreme cases.

New devices for instruction were developed by Pestalozzi. He fastened large letters of the alphabet on cards and introduced the use of slates and pencils. His most important innovation was that of simultaneous instruction. Elementary teaching became much more effective with the use of these aids.

Conclusions

It has been generally concluded that Pestalozzi was not a philosopher but a great educator instead. As an

¹Frederick Eby and Charles Arrowood, The Development of Modern Education, p. 631.

educator, Pestalozzi made many changes in the typical school system during his time, and the following may be classified as his greatest contributions to education:

Pestalozzi's democratized education.--Pestalozzi had faith in education as the supreme means for individual and social betterment. He was able through his enthusiasm to induce kings and rulers to take an interest in the education of children in hovels. Pestalozzi proclaimed that it was the absolute right of every child to have his God-given powers fully developed.

Pestalozzi's psychologized education.--Pestalozzi believed in developing, unfolding, and strengthening the powers of the child's mind through exercise in the normal activities of life. He was the first educator to make systematic observations of the growth of children.

Pestalozzi's idea of organic education.--Pestalozzi was the first to appreciate the interrelation of the various aspects of the human organism and the normal functioning of all powers in harmony. He emphasized the equal development of all powers--head, hand, and heart--so as to produce a personality adjusted harmoniously and capable of living a useful life in society.

The concrete always preceding the abstract.--According to Pestalozzi, education began with the perception of concrete objects, the performing of concrete acts, and the experiencing of actual emotional responses. This idea was

his greatest contribution to education. The teaching of geography, arithmetic, and nature study were revolutionized by this idea.

Grading of school subjects.--Pestalozzi decided that every form of training and instruction should proceed in a slow, gradual course, so as to match the unfolding powers of the child. From this principle, the grading of the modern school into classes and the grading of the elementary curriculum were developed.

New devices of method.--Pestalozzi originated the use of letters of the alphabet fastened on cards and introduced the use of pencils and slates. His most important innovation, however, was that of simultaneous or class instruction.

Pestalozzi's revolutionized discipline.--Pestalozzi based discipline upon the mutual sympathy of pupil and teacher. Persuasion and personal counsel were used to deal with every infraction. As a last resort, punishment was used in extreme cases. Pestalozzi was one of the first to introduce kindness in the school room.

Pestalozzi's influence on teacher training and study of education as a science.--Pestalozzi established his normal school at Yverdon to train teachers in his system or style of education. This school was used as a model in establishing normal schools in many countries. Pestalozzi's ideas stimulated the greatest effort to investigate the science of education. Some of his students thus influenced

were Herbart, Froebell, Madame de Stael, Fallenberg, Diesterweg, Uno Cygnaeus, DeGuimps, Mays, and Neef. Through the influence of these educators, many changes have been made in the educational system.

BIBLIOGRAPHY

Books

- Adamson, John William, Pioneers of Modern Education, Cambridge, University Press, 1905.
- Anderson, Lewis Flint, Pestalozzi, New York, McGraw-Hill Book Company, Inc., 1931.
- Barnard, Henry, Normal Schools, Hartford, Case, Tiffany and Company, 1851.
- Barnes, Earl, Studies in Education, California, Stanford University, 1897.
- Benedict, Agnes E., Progress to Freedom, New York, G. P. Putnam's Sons, 1942.
- Bennett, Charles, History of Manual and Industrial Education up to 1870, Peoria, Illinois, The Manual Arts Press, 1926.
- Boyer, Charles C., History of Education, New York, Charles Scribner's Sons, 1919.
- Brockett, Linus P., History and Progress of Education, New York, A. S. Barnes & Company, 1859.
- Brubacher, John S., A History of the Problems of Education, New York, D. Appleton and Company, 1934.
- Butts, R. Freeman, A Cultural History of Education, New York, McGraw-Hill Book Company, 1947.
- Burton, William H., Introduction to Education, New York, D. Appleton and Company, 1934.
- Campayre, Gabriel, History of Pedagogy, Boston, D. C. Heath and Company, 1892.
- Cole, Percival Richard, A History of Educational Thought, H. Milford, Oxford University Press, 1931.
- Dubberly, Elwood P., History of Education, New York, Houghton Mifflin Company, 1920.
- Davidson, Thomas, A History of Education, New York, Charles Scribner's Sons, 1911.

- DeGuimps, Roger, Pestalozzi: His Life and Works, New York, D. Appleton and Company, 1890.
- Duggan, Stephen, A Students Textbook in the History of Education, New York, D. Appleton-Century Company, 1936.
- Eby, Frederick, and Arrowood, Charles Flinn, The Development of Modern Education, New York, Prentice-Hall, Inc., 1934.
- Graves, Frank Pierrepont, A History of Education, New York, The Macmillan Company, 1927.
- Green, J. A., Pestalozzi's Educational Writings, New York, Longmans, Green and Company, 1912.
- Hart, Joseph K., The Discovery of Intelligence, New York, The Century Company, 1924.
- Hoyt, Charles, History of Modern Education, New York, Silver, Burdett and Company, 1908.
- Kane, W., A History of Education, Chicago, Loyola University Press, 1935.
- Kemp, E. L., History of Education, Philadelphia, J. B. Lippincott Company, 1904.
- Knight, Edgar W., Reports on European Education, New York, McGraw-Hill Book Company, Inc., 1930.
- Krusi, Herman, Pestalozzi: His Life, Work, and Influence, New York, American Book Company, 1875.
- Monroe, Paul, A Brief Course in the History of Education, New York, The Macmillan Company, 1910.
- Monroe, Paul, A Cyclopedia of Education, New York, The Macmillan Company, 1913.
- Monroe, Paul, A Text Book in the History of Education, New York, The Macmillan Company, 1911.
- Munroe, James Phinney, The Educational Ideal, Boston, D. C. Heath and Company, 1906.
- Myers, Alonzo F., Education in a Democracy, New York, Prentice-Hall, Inc., 1942.

- Parker, Samuel Chester, General Methods of Teaching in Elementary Schools, New York, Ginn and Company, 1919.
- Parker, Samuel Chester, A Textbook in the History of Modern Elementary Education, New York, Ginn and Company, 1912.
- Pestalozzi, Johann Heinrich, Leonard and Gertrude, translated and abridged by Eva Channing, Boston, D. C. Heath & Co., 1897.
- Pinloche, Auguste, Pestalozzi and the Foundation of the Modern Elementary School, New York, Charles Scribner's Sons, 1901.
- Quick, Robert Herbert, Essays on Educational Reformers, New York, D. Appleton & Company, 1892.
- Seeley, Levi, History of Education, New York, American Book Company, 1904.
- Ulich, Robert, Three Thousand Years of Educational Wisdom, Cambridge, Massachusetts, Harvard University Press, 1947.

Articles

- Athearn, Clarence R., "A Pioneer Friend of Children," The Journal of the National Education Association, XIII (December, 1924), 345.
- Burgauer, A., "The 200th Anniversary of Pestalozzi's Birth," School and Society, LXIII (March 30, 1946), 220-221.
- Fox, D. B., "European Influence on the Industrial Education in the United States," Industrial Arts and Vocational Education, XXXIII (October, 1944), 305-306.
- Hardin, Robert A., "Our Evolving Philosophy of Industrial Arts," Industrial Arts and Vocational Education, XXXIX (May, 1950) 180.
- Kilpatric, W. H., "What American Education Owes to Pestalozzi," The Journal of the National Education Association, XXXV (January, 1946), 17-18.
- Schairer, Reinhold, "Education and Life," Education, LXIV (December, 1943), 219-224.
- "Swiss Man of the Year," Time, XLVII (January 14, 1946), 60.

"Thank You Mr. Pestalozzi," Senior Scholastic, XLVIII
(May 6, 1946), 22.