Pestalozzi International

To nurture and develop

Pestalozzi and Education

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Content Summary

Johann Heinrich Pestalozzi (1746-1827) revolutionized education in Switzerland and beyond. Believing that every individual has the right to learn and that education should be holistic - developing the Head (intellectual abilities), Heart (moral values), and Hands (practical skills) - his work laid the foundation for democratic, child-centred education.

1 Education in Pestalozzi's Time Education in 18th-century Switzerland was poor and neglected. Schools were overcrowded, teachers untrained, and the curriculum limited to rote, religious instruction. Pestalozzi criticized these conditions and advocated for education that was meaningful, accessible, and suited to each child's needs.

2. Poverty Pestalozzi's personal experience of financial hardship and his exposure to rural poverty influenced his lifelong commitment to the poor. He believed education should develop inner strength, morality, and independence. He ran several institutions that provided education, work skills, and care to impoverished children.

3. Morality For Pestalozzi, moral development was the core of education. He believed humans have both a sensual (animal) and moral (divine) nature. Education helps individuals rise from selfishness to selflessness through love, trust, and responsibility. He saw morality as inseparable from religion, but emphasized practice over dogma, and love over doctrine.

4. A Heart-led Education of Head, Heart, and Hands Pestalozzi's concept of an all-round education emphasized a balance between intellectual, emotional, and practical development. He believed that love must guide both knowledge and skill, and that children learn best through active engagement, real-life experience, and emotional security - especially within the home. He argued that school should mirror what happens within the ideal family.

5. A Child-Centred Education Inspired by nature, Pestalozzi saw children as organically developing beings. Education should follow the child's natural pace, abilities, and interests. Teachers must create environments that nurture this growth through sense-impression (learning through the senses), concrete experience, and gradual abstraction.

6. The Teacher Teachers are like gardeners, supporting but not controlling growth. Pestalozzi emphasized the teacher's character, love, and empathy over subject expertise. Schools should feel like families, and teachers should act as moral role models. Discipline should be loving, firm, and supportive, never harsh or based on fear.

7. Teaching Methods Pestalozzi introduced new methods for teaching subjects like language, arithmetic, drawing, geography, and science using real objects, observation, and practical experience. He also stressed vocational education for the poor and the importance of integrating learning across subjects.

Pestalozzi's educational legacy continues to shape modern schooling: child-centred learning, an integrated curriculum, moral education, relevant vocational skills training and the professionalization of teaching are all grounded in his vision of education as a tool for human and social transformation.

Introduction

Johann Heinrich Pestalozzi (1746–1827) is known as the Father of modern education. The modern era of education started with him and his spirit and ideas led to the great educational reforms in Europe in the nineteenth century.

Pestalozzi believed in the ability of every individual human being to learn and in the right of every individual to education. He believed that it was the duty of society to put this right into practice. His beliefs led to education becoming democratic; in Europe, education became available for everyone.

Pestalozzi was particularly concerned about the condition of the poor. Some of them did not go to school. If they did, the school education was often useless for their needs. He wanted to provide them with an education which would make them independent and able to improve their own lives.

Pestalozzi believed that education should develop the powers of 'Head', 'Heart' and 'Hands'. He believed that this would create moral individuals who are capable of knowing what is right and what is wrong and of acting according to this knowledge. Thus the well being of every individual could be improved and each individual could become a responsible citizen. He believed that empowering and ennobling every individual in this way was the only way to improve society and bring peace and security to the world. He tried to create a complete theory of education that would lead to a practical way of bringing happiness to humankind.

Pestalozzi saw teaching as a subject worth studying in its own right and he is therefore known as the father of pedagogy (the method and practice of teaching, especially as an academic subject or theoretical concept). He caused education to become a separate branch of knowledge, alongside politics and other recognised areas of knowledge.

Education in Switzerland in Pestalozzi's Time

The Poor Condition of Schools and Education
In Switzerland, as elsewhere in Europe, a small rich aristocracy ruled the country and had all the privileges, while the majority of the people had no rights, had to pay heavy taxes, and were extremely poor, illiterate and degraded.

There were very few schools, often with no buildings, or with buildings that were in very bad condition. Teachers were untrained and paid badly. They usually had other jobs. In many of the village schools the teachers were old soldiers, cobblers or tailors. Usually they were very conservative, especially in their religion. Often children were crowded into a single damp room, usually in the house of the schoolmaster, who was given no money to buy any school furniture. Often the school facilities were as unhealthy as the buildings the children normally worked in.

Religion was often the only subject that was taught and it was often taught without being explained. Children were made to memorise words that they often did not understand. Children learnt to read and to say by heart the church catechism (a summary of the principles of the Christian religion used for religious instruction), prayers and parts of the bible. One report states that children would read the bible aloud, beginning where they had stopped the day before. When they finished the whole Bible, they would simply start from the beginning again. The schoolmaster did not explain any of the passages and the children could not understand most of it. Writing was usually taught only if parents particularly asked for it to be and arithmetic was often not taught at all.

Since the teachers were ignorant themselves they usually knew no teaching methods. This meant that discipline was kept by corporal punishment and children hated school. They were frustrated and confused and often hated their teachers.

Some extracts from texts, showing the poor state of schools, of schoolmasters and of education in general

From Green (1)
'In Canton Zurich there were some 350 country schools of which less than a hundred had buildings of their own, and such buildings as there were could not have been more unfit for the purpose.

"As I opened the door [of the schoolroom], an oppressive feeling of dampness struck me. Packed in a dark corner our country's greatest treasure – its youth – were sitting, compelled to breathe the hot air reeking with thick foul mist. The windows are never cleaned, the room is never aired. The children are so closely heaped together that it is impossible to get out without climbing over seats and tables." Most of the schools were in private houses: "I keep school in my own house, and have only one room for both my household and the school. I receive no rent and no allowance for school furniture," writes one of the masters. Occasionally the schoolmaster had to hold school in different houses in turn. Schoolmasters were usually badly paid, and necessarily had to combine schoolkeeping with some other business.'

From Holman
'The instruction was generally given in the schoolmaster's only living room, while his family were carrying on their household avocations [occupations]. In places where there were schoolrooms, they were never large enough to provide sufficient space for all the children to sit down. The rooms were low and dark, and when the door was opened the oppressive fumes... met the visitor; closely crammed together sat the children, to the ruin of their health, breathing in the foul and heated vapours. The stoves, too, were generally overheated, and the closed windows were darkened by the steam from the breath of so many human beings... The noise was deafening; the schoolmaster had little authority over his pupils; there was no fixed age at which children were either sent or withdrawn; parents would frequently send them at four or five, and take them away again as soon as they could earn any money, generally in their eighth or ninth year. The instruction was bad and irregular.'

From Green (1)
'Of method in teaching, as we understand it, there was no thought. A child would come to school not knowing his alphabet. The teacher would show it to him in his book, say it to him once pointing to the letters and tell him to sit down and learn it. In an hour and a half he would come again to test him. This process would go on for many weeks, until finally the child could say it through and thus was ready to take the next step. Want of method and ignorance on the part of the teacher were made up for by an abundant use of the rod. The children hated the school, and learned nothing there that could possibly help them to lead self-respecting lives.'

From Green (1)
'An interesting story, which is told by the biographer of Oberlin, a clergyman who did heroic work for his people in the Alsatian parish of which he had charge, shows that... [the above descriptions] of Swiss schools applies with equal force to the schools of other lands. When his predecessor in the parish took up his charge he asked to be shown the principal schoolhouse. He was taken to a miserable cottage where a number of children were crowded together without any occupation, and in so wild and noisy a state that he could with difficulty get a reply to his inquiries for the master.
"There he is," said one of them, pointing to a withered old man, who lay on a bed in one corner of the room. "Are you the schoolmaster, my good friend?" enquired Stouber.

"Yes, sir."

"And what do you teach the children?"

"Nothing, sir."

"Why, then, were you made schoolmaster?"

"Why, sir, I had been taking care of the pigs for the [people of the] countryside for many years, and when I got too old and feeble for that, they sent me here to take care of the children." (From Memoirs of Oberlin).'

From Holman
Another story about how a schoolmaster was employed concerns Krüsi. In 1800 Krüsi brought orphan children to be taught at Burgdorf and became Pestalozzi's first assistant. (Though uneducated he was open minded and understood children and proved to be a good practical schoolmaster, who was willing to learn from Pestalozzi. Krüsi stayed with Pestalozzi until 1815.)

The following is the account of how Krüsi became a teacher. Holman writes that,

'Krüsi, as a lad and when a young man, earned his living by travelling about the country buying and selling small wares. One summer day as he was crossing a mountain, carrying a heavy load of thread, he met M. Gruber, the State Treasurer, and this conversation took place:

"It's very hot, Hermann," said Krüsi.

"Yes, very hot. As Hoerlin the schoolmaster is leaving Gais you might perhaps earn your living less laboriously. Would you not like to try for this post?"

"It is not simply a question of what I would like: a schoolmaster ought to have knowledge of matters of which I am wholly ignorant," [replied Krusi].

"You could easily learn, at your age, all that a schoolmaster there ought to know."

"But where and how? I do not see any possibility of this."

"If you have any inclination for it, the way can easily be found. Think about it, and do not delay."

Upon this he left me.

I considered and reflected, but no light seemed to come to me. However I rapidly descended the mountain hardly feeling the weight of my load.

My friend Sonderegger procured a single specimen of writing, done by a skilful penman of Altstätten, and I copied it over a hundred times. This was my only preparation. Nevertheless, I sent in my name, but with little hope of success.

There were only two candidates. The chief test consisted in writing out the Lord's Prayer, which I did with all the care of which I was capable.

I had carefully noticed that capitals were used here and there, but as I was ignorant of the rule I had taken them for ornament. Accordingly I distributed mine in a symmetrical manner, with the result that some came in the very middle of words. As a matter of fact neither of us knew anything.

When the examination was over, I was sent for and Captain Schæpfer announced to me that the examiners had found us both very weak; that my competitor could read the better, but that I was the better writer; that as I was only eighteen years old, while the other was forty, I should be better able to acquire the necessary knowledge; that, moreover, my room being bigger than that of the other applicant, was more suitable for a schoolroom; and, in short, I was nominated to the vacant post.

So, Krüsi's room was cleared of some old furniture, and a hundred children were put into it. This was in 1793'.

The description gives a typical example of the way in which schoolmasters were appointed.

Pestalozzi's Criticism of the Condition of Education in His Day
Pestalozzi was very critical of the education of his times. Indeed, he spent his whole life protesting against the schools and the condition of education.

'...in most schools... the schoolmaster seems as if he were made on purpose to shut up children's mouths and hearts, and to bury their good understandings ever so deep underground. That is the reason why healthy and cheerful children, whose hearts are full of joy and gladness, hardly ever like school.' (From Pestalozzi's book 'Christopher and Elizabeth')

In another of his books, 'How Gertrude Teaches her Children' Pestalozzi writes,

'...the great number of schoolmasters, of whom there are thousands today who have – solely on account of their unfitness to earn a respectable living in any other way – subjected themselves to the laboriousness of this occupation; and they, in accordance with their unsuitability for anything better, look upon their work as leading to nothing further, but sufficient to keep them from starvation.'

Turning again to 'How Gertrude Teaches her Children', Pestalozzi writes,

'Our unpsychological schools are in essence merely artificial sterilising machines, for destroying all the results of the power and experience that nature herself calls to life in children...

We leave children, up to their fifth year, in the full enjoyment of nature; we allow every impression of nature to influence them: they feel the power of these: they learn to know full well the joy of unhampered freedom and all its delights. The free natural bent, which the happy, untamed, sensuous being derives from his development, has already taken in them its most definite direction.

And, after they have enjoyed this happiness of sensuous life for five full years, we cut them off from all their unhampered freedom: pen them up like sheep, whole herds huddled together in stifling rooms: pitilessly chain them for hours, days, weeks, months, years, to the study of unattractive and wearisome letters: and, compared with their former condition, tie them to a maddening course of life.'

Pestalozzi criticised the schools because they were out of harmony with nature. He hated the way that the natural powers of a child were killed by a poor home environment and by too much school discipline, which made them sit unnaturally still for hours at a time and often involved flogging children. He believed that rigid discipline and mechanical teaching methods, such as rote learning, stop the natural free development of the minds of children. He did not like the way religion was taught with no proper explanation and the fact that often religion was the only subject taught.

Pestalozzi believed that the teaching methods and the content of the classes were not relevant to the needs of the people and society. Classroom teaching was rigid and took no notice of the ability of individual children to learn, nor of the purpose of their learning. He believed that the schools destroyed imagination and originality, relying too much on learning from books. Students memorized printed words without understanding them. The schools separated theory and thinking from action or doing, relying only on the former and providing no opportunity for the latter. The children had no direct experience and so were not able to learn through their senses. Pestalozzi believed that theoretical knowledge is useless unless it can be used practically, and that schools did not teach what the children really needed for their future lives.

Pestalozzi believed that the wrong type of 'education' is the reason for things going wrong with society. Meanwhile he believed that a good education is the only cure for the ills found in society.

Poverty
(Information largely based on Brühlmeier)

The Reasons for Poverty
Poverty was widespread in Pestalozzi's time. Peoples' individual characteristics, for example a lack of talent, laziness or moral weakness can result in a person becoming extremely poor. Unavoidable difficulties can also lead to poverty; in Pestalozzi's time there was no insurance against illness, fire or the early death of the breadwinner of the family. The effect of any such adversity was likely to be poverty.

However the main reasons for widespread poverty were of a social nature. Over the centuries in Switzerland the farming class was taxed more and more. They were so severely taxed that often they had to pay out more in taxes than the income they got from farming. One form of tax was the 'tithe', a tax which had originally been paid 'in kind' (with livestock, grain, fruits etc.) and which amounted to a tenth of the agricultural produce. The tithe then started to be made higher and higher. In the area of Zurich there were two villages where the population was prosperous, whereas all the other villages were full of very poor people. The reason that these two villages were wealthy was because they did not have to pay the tithe owing to an ancient right they had. The destructive effect of the tithe was thus obvious.

Another reason for the poverty at Pestalozzi's time was that the population was increasing and so there was not enough suitable farming land for everyone. Many farmers had to look for other ways of making money. They found ways of making a living in the developing textile industry. Therefore farmers without land gradually became involved in this work. However, industrial production did not lead to prosperity because it weakened the ancestral crafts and trades and often badly exploited the unemployed farmers and manual workers. Even though Swiss villages did sometimes make quite a lot of money, Pestalozzi recognised that people used to poverty did not know how to handle this income and thus spent it unwisely. This led to inflation, which meant that gradually people with money became poor.

How Pestalozzi's concern for the poor came about
Pestalozzi was from a relatively well off family – they were citizens of Zurich – and, in Switzerland at the time, only the citizens of the towns were allowed to rule the country, become clergymen and judges and do business. However when Pestalozzi was five his father died, leaving the family badly off. Compared to his friends Pestalozzi was poor.

From the age of nine he used to visit his grandfather in a nearby village. His grandfather was a pastor and was involved with the education of the village children and the welfare of the people of the village. Accompanying his grandfather, Pestalozzi saw what the rural poor had to suffer. He was shocked by the misery they endured, seeing children crammed into humid cellars spinning and weaving, learning nothing else, becoming ill, working in order that their families had enough to eat. This was also when Pestalozzi first came across the dreadful condition of the village schools.

Pestalozzi's commitment to help the poor

As a teenager, Pestalozzi was not sure where he belonged, whether with the wealthy city children or with the poor rural ones. He felt closer to the poor rural people and so his dedication to the poor began. He read and discussed the current philosophical ideas, on the need for equality and the liberation of the poor. Chief amongst these were the ideas of Rousseau, the philosopher who influenced the thinking behind the French Revolution, and in its turn, the Swiss Revolution.

Pestalozzi's desire to help the poor began to take shape. He gave up his original ideas of becoming a pastor and then of becoming a lawyer in order to help the poor. Instead, he decided to become a farmer, to 'return to nature' and escape the vices of the city. He thought that by being a farmer he could best show the poor how they could help themselves to overcome their impossible circumstances.

Pestalozzi's Understanding of Poverty

Pestalozzi believed that human strength lies in character and not in possessions. As long as people were not living in what Pestalozzi called 'misery' (when people lack the basic essentials like food and shelter), he believed that poor conditions or modest circumstances were very positive.

Pestalozzi believed that life lived in modest circumstances is positive because it forces people to use their own strengths and so to develop them. The family life of poor people is more likely to have opportunities for mutual helpfulness, self-sacrifice and loving sympathy, and therefore for the development of morality; there may be fewer such opportunities in the family life of the rich.

So while Pestalozzi believed that 'misery' must be abolished, he did not believe that the elimination of relative poverty was at all desirable. Rather, such poverty should be used to help develop morality. If a person does not have financial means he or she need only be poor externally, that is lacking material things. Helped by a suitable education, a person's strengths can be developed, making that person internally rich.

To Pestalozzi it is this internal prosperity that matters. He believed that external poverty (but not destitution!) is generally a better condition than external prosperity for the development of internal prosperity. This is why Pestalozzi's education of the poor is not designed to take people out of poverty into wealth, but instead gives training for a life of poverty.

Pestalozzi's involvement with the poor

'Did you not know? For thirty years my life was a never-ending economic confusion and a battle against the enraging embarrassment, which comes from extreme poverty! Did you not know that for about thirty years I lacked the necessities of life; or that up to this day I can visit neither social gatherings nor churches because I am not clothed and I cannot afford to clothe myself? Oh Zschokke! Do you not know that in the streets I am the laughingstock of the people, because I walk around like a beggar? Do you not know that a thousand times I could not afford lunch and at lunchtime, when even all the poor sat at their tables, I ate my piece of bread with fury in the streets?' (From a letter of Pestalozzi's written to Heinrich Zschokke in 1802)

Pestalozzi's work for the poor
Pestalozzi built the Neuhof in a village near Zurich in order to live there as a farmer. The Neuhof was Pestalozzi's family home until his death, although he spent many years of his life away from it. At the Neuhof, Pestalozzi experimented in modern farming techniques, hoping to introduce them to his poor neighbourhood by example.

However, Pestalozzi's farming project failed, partly because the local people were not ready for his innovative methods. The positive side effect of this failure was that it made Pestalozzi start an industrial school for poor children, also at the Neuhof, in 1773.

Pestalozzi took children into his own home, fed them, gave them clothes, showed them how to work, and educated them. In 1776, 22 children lived with Pestalozzi and two years later there were already 37. He built two new buildings – a factory room and a house for the children – and employed weavers, spinners and farm girls for the work in the fields, who also supervised the children. While the children were working at the spinning wheel or at the loom, Pestalozzi taught them reading and arithmetic.

Following the closure, in 1779, of Pestalozzi's industrial school for the poor at the Neuhof, he longed, throughout his life, to manage a house for the poor. After his years (1800-1798) as a writer, politician and educational theorist, he finally did so, 20 years later. In Stans, Pestalozzi looked after children orphaned by the Napoleonic wars. This is where the most famous images of Pestalozzi, as father to orphans, come from.

However the project at Stans did not continue for long, lasting for less than a year. Although Pestalozzi's institutes for education and his schools in Burgdorf (1799-1804) and Yverdon (1804-1825) took a proportion of poor children on scholarships and were very important and successful, they never allowed him to do what he really wanted – to run an institution aimed primarily at helping the poor. Nonetheless, Pestalozzi's efforts as author, politician and educator, were always driven by his desire to improve the situation of the poor.

When Pestalozzi finally returned to the Neuhof at the age of nearly 80, he decided to reopen his home for poor children. He began the building of a new house for this purpose but did not live to see his dream come true.

Empowering the Poor
Pestalozzi considered a practical 'hands' education, which includes manual training and vocational education, to be very important, especially for poor children. This is because he believed that people are educated best through doing things, and because he wanted to provide the poor with the know-how to help themselves. He divided vocational education into three major areas – agriculture, handicrafts (including domestic training) and industry.

Pestalozzi believed that the best thing one person could do for another is 'to teach him to help himself'. The many philanthropists of his day usually helped the poor by giving charitable donations. Pestalozzi believed that such gifts make the recipients even more dependent than they were before, and that therefore, such gifts are worse than useless.

Pestalozzi believed that the manual training or vocational education offered should always be appropriate to the needs of those being educated and therefore to the sort of life the children would be most likely to lead on leaving the educational institution, especially since poor children would have to help support their families. The skills children learn in school should therefore be the skills that best help them in their real lives. Pestalozzi lived at a time when it was no longer possible for everyone to earn a living from the land as farmers and many people had to do factory work to earn a living. These people had, at best, a small amount of land, which produced only part of the food their families needed. So Pestalozzi's pupils were taught to spin and weave or to farm – whichever was most likely to be their future way of earning money. Practical, productive activity played an important part in all Pestalozzi's plans for the education of the poor. He also encouraged poor children to save, teaching them the value of thrift.

The best education, says Pestalozzi, teaches the child 'to look after and manage methodically those things which would most likely be his when he... [is] grown up. It... [teaches] him how to use these things for his own good and for the welfare of those dear to him'. This does not mean, as some who criticise him claim, that Pestalozzi was against people improving their lives and incomes if they had the capacity to do so, but that he recognised that for the majority, a life of poverty was inevitable. He believed that education should help human beings adjust to their circumstances and live comfortably with what they have got, rather than long for what they would never get; education should prepare every person, rat-catcher or lawyer, to be happy in his or her life's work, by providing the wisdom needed to be able to live self-respecting lives, happily and morally.

Pestalozzi hated to see the exploitation of children by farmers in the neighbourhood of Neuhof. These farmers would take orphaned children, and keep them overworked and underfed to increase profit. The consequences for the children were disastrous – they grew up ignorant, illiterate and degraded. Pestalozzi was worried by the moral degradation of the poor. While he blamed the corrupt government and the selfish ruling class for the social evils most people had to put up with, he thought that the real source of evil came from the ignorance and depravity of the majority of the people. For example, he thought that if the majority of people were honest, it would not be possible for government to be corrupt.

Pestalozzi believed that the individual who receives vocational training alone is degraded to the level of a slave, trained only to make a living. He recognised that the inner nature of each individual must be made better if his or her external circumstances are to improve; he recognised that if people's minds and bodies are impoverished they naturally tend to become degraded and so dishonest and cruel. Therefore, while Pestalozzi emphasised the importance of vocational training for the poor, he stressed that children need more than just a vocational training. Education should also always include mental or academic (head) and moral (heart) education too.

In ‘The Evening Hour of a Hermit’, Pestalozzi writes that education for a particular occupation ‘must always be subordinate to the universal aim of a general education’.

And in ‘How Gertrude Teaches Her Children’ he writes,

‘The aim of education is not to turn out good tailors, bootmakers, tradesmen, or soldiers, but to turn out tailors, bootmakers, tradesmen, and soldiers who are in the highest meaning of the word, men. Consequently the aim of all education is and can be no other than the harmonious development of the powers and faculties of human nature.’

By ensuring that vocational training also includes moral and mental education, Pestalozzi provided an education for good citizenship. He was the first to see the importance of combining vocational training with mental and moral education.

A Pestalozzi education is thus a practical preparation for the life people are actually going to lead, helping people to become skilled, employable and independent as well as morally good citizens. In this way Pestalozzi was unique.

Morality
(Information largely based on Bruhlmeier)

Anthropology (the study of humankind) and Morality
Pestalozzi was interested in people and developed his social, political, theological, psychological and educational theories by observing human nature more than by reading the theories of others.

Pestalozzi believed that human nature has two definite sides. One side is a human's sensual or animal nature, which is largely to do with instincts. The other side is a human's higher or moral nature, in which humans show God-like or divine qualities. Because human nature has two sides, it is full of contradictions and tensions.

Although they are very different from each other, a human's animal nature and his or her moral nature are related to each other. Moral nature develops out of animal nature – for example the natural curiosity of the animal state develops into a genuine search for the truth in the moral state, while indolence can develop into impartiality.

The process described above follows a three-step course of development - from the natural state through the social state to the moral state.

Since humans must satisfy their needs the natural state is impossible to live in harmoniously. Therefore humankind entered into the social state of being, forming societies, where there are laws so that humans can work together. In the social state humans benefit from rights but must also accept restrictions and fulfil duties – they have to obey.

In the social state humans tend to continue to be greedy, selfish and egotistical, as in the natural state. They often want to benefit from the rights of the social state but to escape all the duties and restrictions. Therefore being in a society does not bring about inner harmony and peace. Society cannot give a human fulfilment but it can provide the framework for a human to gain self-realisation and move into the moral state. Meanwhile the burdens of living in a society can help make people realise the importance of living as moral individuals.

The individual must move into the moral state of being, voluntarily giving up his or her selfish desires, in order to live without tensions and contradictions. A moral person develops the moral powers of the heart – including love, trust, gratitude, the desire to help others and a sense of responsibility – and stops being selfish. Through this transformation into a moral being it is possible to become truly free because the tensions of human nature are no longer felt. It involves giving up a certain amount but this is worthwhile to the individual because of the happiness and peace that are the result.

Because many humans are satisfied to remain in the social state without reaching for the moral state, social problems continue to exist, due to humankind's greed. Therefore society fails.

Pestalozzi believed that this transformation of humans into moral beings is the most important role of education and that only through education can an individual fully develop his or her own morality. By helping to form moral beings, education also helps to overcome the ills of society, creating people who have the humane and unselfish qualities needed to make society work.

Religion and Morality

Pestalozzi's feelings and emotions were very religious and he tried to live according to the teachings of Jesus. He considered himself to be a Christian but, because some of his ideas went against mainstream Protestant religion, many people criticised him, saying that he failed to teach religion and that he was not Christian.

Pestalozzi had some ideas that were in disagreement with Christian dogma. (Dogma is a principle or set of principles laid down by an authority as the absolute truth). For example, he did not believe in 'original sin'. (Original sin is the tendency towards evil, with which Christians believe everybody is born.) Instead, Pestalozzi believed that everybody has innate goodwill and is basically good.

Even as early as his experience at Stans, Pestalozzi stated that he taught the children 'neither morality nor religion'. By this he meant that he did not offer formal religious instruction and did not explore moral principles with the children. He refused to teach Christian dogma. Instead he aimed to establish in the children an understanding of right and wrong through example and by arousing feelings of love, confidence and sympathy in them. He aimed to make the educational environment rather than formal religious instruction the means of moral education.

For Pestalozzi, morality and religion do not exist in words but in actions of love. He did not believe in a religious practice which paralysed a person's interest in worldly affairs and which alienated him from the world. Therefore he did not like rationalist discussions about the texts of the Bible, he questioned the authority of the church and was not interested in culture and fine arts connected with religion.

Pestalozzi was against the often bigoted and religiously conservative schoolmasters and objected to two practices, which were then universal in schools. One was making the Bible the first text children learnt to read from, the other was making children learn the catechism (a summary of the principles of the Christian religion used for religious instruction) by heart. He was against these practices because the children had to memorise abstract ideas which they did not understand, without being taught to think, feel and act rightly. Pestalozzi believed that a child must experience and live religion before he or she is taught religion. So the basis of a moral-religious education is to practise rather than to preach.

Pestalozzi believed that religion is a matter of the heart and not of the head. He liked to be simple in worship and believed in a life without luxury. For Pestalozzi, people's religiousness is best shown in moral behaviour, and day-to-day acts of love in working for the service of their fellow humans in their community.

According to Pestalozzi, love and truth are simply two different names for God. Since the education he offered was based on the cultivation of the heart to love and the mind to understand the truth, he believed that the education he offered was entirely religious.

For Pestalozzi moral education is closely connected with religious education; he often speaks of 'moral-religious education' as an inseparable unit. He believed that true religion is only possible for a moral being. It then helps him or her to strive to be the noblest that he or she can be. He knew that if people feel belief in God really deeply in their hearts, they stop seeking the pleasures of life at the expense of fellow human beings. This belief thus helps people to overcome their own egoism.

Affiliation to a particular Christian church was unimportant to Pestalozzi; he lived happily with people of other denominations and is never known to have attempted to change another person's religious opinions. The only people he could not tolerate were hypocrites who pretended to be pious in order to exploit or suppress their fellow men.

The Development of Morality in the Child – The Heart
As a child, Pestalozzi had experienced truly dedicated love from his mother and the family's maid, Babeli. His mother devoted her life to her children, but it was the family's maid who had a particularly strong influence on Pestalozzi's educational theory and practice.

Pestalozzi's father, on his deathbed, had asked Babeli to stay with the family and she did so, until the death of Pestalozzi's mother, more than thirty years later. Pestalozzi later wrote of her,
'She sacrificed herself for us completely. From the roughest work of the meanest servant to the highest, she did everything the whole time of her service. While economising every penny, she watched over our honour with incredible tenderness; nothing escaped her. But she put no value on this. If anyone said, "You do a great deal for the household", her answer was, "I promised it, and I must keep my promise". She rejected any offer of a better place with these words, "What do you think of me?" Every offer of marriage with "I must not."'

Pestalozzi learnt from Babeli that a person's generosity and noble-mindedness could cause other people to be generous and noble-minded too. Because of Babeli, he also came to believe that all people are born good. Babeli was one of two models for 'Gertrude', (the second being Elisabeth Naef, who worked for Pestalozzi and his family at the Neuhof).

'Gertrude' is the mother in Pestalozzi's novel 'Leonard and Gertrude' (1781-1787), which was a popular novel written as a guide to mothers on how to educate their children.

The novel explores Pestalozzi's theories that the family is the centre of society, that society can only improve as a result of the good influence of each individual family, that education starts in the home and that the mother is the child's first teacher.

Gertrude's natural methods of teaching are carried out with sympathy and love and her influence is stronger than anybody else's. Nature, through Gertrude's natural simplicity, prepares her children for the world. The children also learn from their mother to have an attitude of loving-kindness in every action.

Gertrude teaches the children basic literacy and arithmetic while they are spinning in the kitchen. Meanwhile, she demonstrates moral behaviour and strength of character. In doing so, she not only saves her family but also becomes the role model for the teacher who comes to educate the children of the village. Her actions lead to the rescue of the entire village from moral degradation. The village represents the world in the novel, just as Gertrude represents motherhood.

In the importance he put on the mother-child relationship, Pestalozzi laid the foundations for the study of psychology (the scientific study of the human mind and its functions, especially those affecting behaviour). He saw the mother-child relationship as essential for the healthy development of the child. He also recognised that a child's own psychology decides his or her readiness and ability to learn. He recognised the influence a child's first emotional experiences have on the rest of his or her life and therefore on society.

Pestalozzi believed that each individual is born with innate qualities or powers, which lead to the child becoming moral if he or she is given the opportunity to gain a deep understanding of morality, (what Pestalozzi calls 'inner perception' or the powers of the heart) through human contact. Pestalozzi also stated that this inner understanding could be reinforced in children through fictive experience, by listening to stories for example.

These innate qualities include a natural goodwill. If properly developed by the teacher (here 'teacher' refers not only to school teachers but also to the family, especially the mother) these innate tendencies develop into the three basic moral emotions of love, trust and gratitude, which form the basis for all the other moral emotions.

The three basic moral emotions of love, trust and gratitude, along with patience, obedience and a sense of duty are essential. These can fully develop in the child only if the mother [or someone who behaves with the child just like a mother] satisfies the child's natural needs in an atmosphere of loving security.

Pestalozzi recognised that morality can never be brought about by pressure, coercion or compulsion, but only by the (emotional) mental-spiritual life of the family and the teacher. If the child is given love at home, he or she will develop into a person who is capable of giving and receiving love. If no love is given, the child is likely to develop into a selfish and unloving adult. Trust only develops if the parents and teachers trust the child. Respect for life, religious faith, and affection for all creatures can only be brought out in the child if the child feels these attitudes in the adult. So the morality of an individual only comes about as a result of the example of morality active in others.

The moral development of the child can only succeed if the child has 'inner composure'. 'Inner composure' comes from the sense of security, which develops in the child if it is brought up in a secure and loving family and if its fundamental needs are satisfied. The satisfaction of a child's needs is different from fulfilling the wishes of the child, which would be negative, because fulfilling the child's wishes would make him or her spoilt. Teachers who are lovingly calm can increase a child's inner composure.

In such an atmosphere of composure, the child becomes willing to share with others, and to help others. Thus the powers of the heart develop and the child can find a secure place in society. The mother supports the child as he or she grows up and gradually separates from the mother, enabling the child to become morally as well as physically and mentally independent.

A Heart-led All Round Education of Head, Heart and Hands
What is included in 'Head, Heart and Hands' (Bruhlmeier (1))
'Head' includes the academic and mental powers which enable a human to understand the world, make reasonable judgements and attend to what is right. These include perception, memory, imagination, thought and language. These powers of the mind are often described by Pestalozzi as 'mental' or 'intellectual' powers.

Education for intellectual development involves the child observing and experiencing, then talking about his or her observations, then writing about them and finally reading what he or she has written.

Heart' includes: feelings like happiness and peace that can be felt about but not towards others or the outside world; emotions like love, trust and gratitude that are felt towards others or the outside world; and feelings like 'this is wrong' or 'that is right' in which a judgement is made. So a person can feel happiness about having a friend (first type when emotion is felt about the friend but not towards the friend). This person can also feel love for the friend (second type when the emotion is felt towards the friend), and feel that the friend is trustworthy (third type when a judgement about the friend is made). 'Heart' also includes the orientation towards what is morally right, the will and determination to do good and the corresponding decision to do what is right.

Education for moral development involves the child first feeling and experiencing morality, then acting in a moral way, then reflecting on morality and so further developing morality.

'Hands' includes a human's practical powers and activities and the common sense, the necessary social skills, the physical strength, the determination and the ability to put these powers to practical use in helping himself or herself and in helping others.

Education for development of practical abilities involves the child beginning by being attentive and learning accuracy in how to use the body and/or the tools involved, followed by imitation and practice, moving on to mastery and further repetition, finally followed by independence and creativity.

P**estalozzi's Childhood Experience**

'The years of my youth refused me everything a human being needs as a first basis for a civil usability. I was protected like a sheep that is not allowed to leave its shed. I never met boys of my age in the alley, did know none of their games, none of their exercises, none of their secrets. Of course I was clumsy in their midst and they considered me to be ridiculous. During the ninth or tenth year already they called me 'Heiri Wunderli von Thorlicken' [or Harry Oddity of Foolstown']... I totally lacked the ordinary and everyday experiences by which most of the children – by tackling and solving thousands of tasks – can be taught and prepared for the usual skills of life, almost without them knowing or wanting it.'

So wrote Pestalozzi of his childhood. As a child, Pestalozzi was greatly loved by his family and therefore he understood the power of love but he was not taught social skills and he had no practical abilities. Pestalozzi believed that his later failings, including an inability to organise his finances, were because of this one-sidedness in his upbringing. He grew up to believe that a lack of practical education produces people who can preach and talk but cannot put thought into action. He did not like any kind of one-sidedness, any over-emphasis on one skill at the cost of others.

His personal experience convinced Pestalozzi that 'love, work and social intercourse [social skills being one aspect of a 'hands' education] are the natural means of developing our faculties' and that all three must be balanced in each individual and developed to the fullest extent possible. To develop an individual's humanity, to develop a morally balanced person who is able to live a moral life, each innate faculty of the child must be developed through a 'harmonious education', which involves the full development of the powers of the 'Head', the 'Heart' and the 'Hands'.

Head and Hands led by Heart

The intellectual and practical skills of head and hand are vital in enabling the individual to act on the developed powers of the heart. Thus the child who has become moral as a result of the loving example of parents, family, teacher and community, needs to have well developed intellectual and practical skills in order to take action in an appropriate way, knowing how to use his or her head and hands to help others.

Firstly, the child feels moral life (heart); secondly, he or she does good (hand); and thirdly he or she reflects on and reads (the reading should only happen at this stage) about morality (head), thus further developing his or her morality (heart again). This approach reversed the traditional approach to school education, where children first learnt about morality by reading about it, for example in the Bible. They did not necessarily see any examples of moral behaviour in others or have any understanding of morality or any ability to behave morally.

Pestalozzi believed in an all round education but always stated that physical and intellectual powers can only lead to the development of a truly moral person if they serve the heart and that they should therefore be subordinate to the powers of the heart. Harmony of the powers of head, heart and hand can be achieved only through an education in love, by love and for love – an education led by the heart. Pestalozzi considered everything else to be meaningless if there was no love.

The Circles a Human Develops in and Lives in (Silber)

In his book 'The Evening Hour of a Hermit', Pestalozzi describes the circles a human life develops in. Outside oneself, the circles are in the following order: the family, then neighbours and the local community, then work or profession and finally the state and country. There is also the circle of nature, animate and inanimate. Inside oneself, the circles are of one's own inner voice and, at the very centre, God. 'God' can also be called love, truth or morality. These circles depend upon and act upon each other and are cause and effect of each individual's development. It is the central circle that connects these circles together.

The purpose of a child's elementary education is to help the child develop the powers necessary to be a dutiful and efficient member of his or her family. This is achieved by helping the child to overcome selfish desires and animal nature and become moral through an education which guides the child to hear his or her inner voice; the voice of God or of love at the centre.

In 'The Evening Hour of a Hermit', Pestalozzi writes that 'the power cultivated in a nearer relationship is always the source of man's wisdom and strength in more distant relationships'. The child first becomes moral through the feelings of love for and trust in members of the family; having experienced parental love in childhood, the child learns to be in touch with his or her inner circles and therefore will act with the same love in the outer circles he or she later moves in. Thus the child is enabled to put morality into practice in the family circle, and in the outer circles in later life. This happens through the development of mental (head) and physical (hands) powers, along side moral powers (the heart). The individual develops naturally and takes a place naturally in the circles he or she moves in and is therefore able to lead a satisfying life.

Pestalozzi believed that, if a child is educated in the ways described, the child becomes capable of behaving in a moral way, able to make the best of his or her circumstances at any stage in life, because he or she is content, happy and at peace and is able to recognise and act on the inner voice. It also leads to the desire and ability to work not only for personal benefit but also altruistically - to the benefit of the natural world and of the people met with in the various circles throughout life.

‘**A Child-centred School Education**

Organic Self-Activity and Completeness
In ‘The Evening Hour of a Hermit’, Pestalozzi makes an analogy between the education and development of a child and the natural growth of a tree,

‘Sound education stands before me symbolized by a tree planted near fertilizing waters. A little seed, which contains the design of the tree, its form and proportions, is placed in the soil. See how it germinates and expands into trunk, branches, leaves, flowers and fruit. The whole tree is an uninterrupted chain of organic parts, the plan of which existed in its seed and root. Man is similar to the tree. In the newborn child are hidden those faculties which are to unfold during life. The individual and separate organs of his being form themselves gradually into unison, and build up humanity in the image of God.’

The child is not, as most educationalists believed at Pestalozzi’s time, a tabula rasa – a clean slate or blank piece of paper - for the educator to write on as he or she chooses. Neither is the child an empty vessel to be filled up with information. Instead, the child is a self-active power, a living and growing organism. The child begins life from birth with the innate powers to develop into a fully moral individual with humanity and with the capacity to act on this humanity; the child also has the urge to develop (and learn), just as the seed contains the design of the mature tree.

Good education should recognise this and should not simply put anything into a person, but rather develop something out of that person, slowly building on what has already been developed. Completeness must be ensured at every stage of a child’s development and education, just as a tree is always complete in form while growing, whatever size it has reached at any particular time.

Putting the Child’s Needs and Abilities First
Pestalozzi did not want children to simply learn the subject matter they were studying but wanted them to be changed by the process of learning. What happens to the child in the course of dealing with the subject matter is essential. Of central importance is the child’s acquisition of ability, the acquisition of the skills of head, heart and hands needed to take action, rather than the gathering of knowledge. An individual may know a great deal but be incapable of living life well because he or she has not got the ability to take action.

Pestalozzi was the first to put the child at the centre of the educational process. In Pestalozzi’s educational practice, education is no longer focused on forcing the child to learn whatever is put before it, however inappropriate to his or her life the material might be. Instead, Pestalozzi puts the child’s needs and abilities first; the teacher supports the child with a relevant education, but as far as possible the learning is initiated by the child. This approach helps to ensure that the unique abilities of the child are developed and gives the child more independence.

Sense-impression
According to Pestalozzi, 'sense-impression' is the direct impression made by the world on the senses. It includes everything that a child experiences and perceives through direct observation, personal experience and involvement, using his or her senses. It is the basis on which children form concepts and ultimately achieve perception. So, teaching must involve more than making the child understand what is being taught; the teacher should engage the child totally, capturing the child's full attention. This will help the child internalise the learning. This can be achieved through concrete experience - meaningful and living human activity – and by encouraging the child to be explorative, giving him or her the opportunity to use as many of the five senses as possible.

It follows that teaching in order to achieve 'sense-impression' needs to be carried out as much as possible in the world outside the classroom and by using real objects as teaching aids, in order to involve as many of the senses as possible. However, picture books can be used as an alternative if the real object is not available.

Active Learning and Concrete Experience
Pestalozzi believed in the importance of the child's own activity for gaining sense impression through concrete activity. He believed that 'it is life that educates' and the potential abilities of the child develop properly only with use. Only by actually thinking, the power of thought is developed; only by actually imagining, the powers of imagination are developed; only through practice does any skill develop; only by using the hands do the hands become skilled; and only by physical effort does the body get stronger. The same applies to moral powers: love only develops by the act of loving and not by talking about love, and religious faith only develops by believing and not by talking about faith.

So, in his 1818 'Address To My House' (his house being the Institute at Yverdon), Pestalozzi writes that,

'The moral, the intellectual, and practical powers of our nature must, as it were, spring out of themselves for themselves. Faith must have its source in faith, and not in the knowledge of that which is believed. Thought must be produced through thought, and not through the knowledge of what is thought or the laws of thought. Love, again, must develop from love, and not from talk about what is worthy to be loved and love itself. And, likewise, practical power must come from doing, and not from the thousand-fold talk about doing…'

Conformity with Nature
For Pestalozzi, education should show 'conformity with nature'. If a child is expected to do something that goes against his or her nature, it is 'mis-education' because it moves away from rather than towards the most important aim of education – the development of the child's humanity.

In an education that conforms with nature, the child is given as much time as is required to develop and is taught only what he or she is ready to learn, following his or her natural impulse to develop. The child is also given as much freedom as possible and is encouraged to explore nature as part of his or her development.

Here Pestalozzi shows the influence of Rousseau, in whose novel 'Emile', the main character, Emile, is an orphan who is given a 'natural' education. Emile is taught nothing until he feels the need to be taught it. There is no hurry to teach him anything. He has no books and is not to be taught to read or write until he is at least twelve, and then only if he wants to learn. Things are his teachers. Thus Emile does not learn science, he discovers it. The tutor is with Emile all the time. He must create the environment for Emile's education, making sure that Emile is put in situations where he can learn and helping him out at the right moment.

Obedience

However, in attempting to put Rousseau's ideas to practical use in the education of his son, who was named Jean Jacques after Rousseau, Pestalozzi recognised that freedom alone is not enough and that obedience is also important.

'Truth is not one-sided,' Pestalozzi writes, 'Freedom is a value. Obedience is a value. We have to connect what Rousseau separated.'

Pestalozzi recognised that it is not enough to leave education to nature because an individual who is left alone could run wild and fall into bad habits. To achieve full humanity, the child must learn obedience to family, teachers and society, who should be the child's guides to morality.

The Unbroken Chain of Education

Although a Pestalozzi education follows the natural route and pace of development of the individual and gives the individual as much freedom as possible, Pestalozzi believed that learning should be complemented by a methodical approach. This leads the child 'from confused intuition to clear perception' and ensures that the innate powers of the child are developed harmoniously.

So, the child is first taught about the things in his or her everyday experience, and learns from what is closest – and therefore most relevant – to him or her. Things near to the child are the best for the education of that child because all the child's senses can be engaged through active experience and observation of familiar things, resulting in sense-impression. Therefore the school should begin teaching the child by providing the opportunities to use the objects and do the actions that the child is familiar with at home. The objects used in teaching differ from place to place but the outcome – the developed powers of head, heart and hands – is the same.

Only once things near to the child are fully understood and named is the child taught about other things. Education should be based on the child's personal experience and move gradually outward from teaching about things nearest to the child, to teaching about things further from him or her. The process should be an unbroken chain which in slow steps connects the easy to the difficult, the near to the far, the concrete to the abstract. This process should always be matched to the child's natural development. At all stages the child should be denied nothing that he or she is capable of understanding, nor be made to learn anything that is beyond his or her ability.

Those things which the child cannot experience directly, can only be learnt about second hand from verbal descriptions, picture books or texts. In this case, the child receives information more passively. Without first hand experience, education becomes more abstract. This sort of education should only be introduced after the child has a firm foundation from an education based on the familiar and the concrete.

The aim of the teacher is to teach the child so that he or she is entirely ready for the next step in education, feeling the interest and motivation to search for further information and understanding. Thus education becomes self-initiated to a great extent.

In this way, learning is carefully guided. It follows a strict pattern, with education in complete harmony with the stages of development of an individual's nature. The education is adapted at all stages to each individual child's level of understanding, pace of learning and unique needs. The teacher finds out what instruction the child needs and how to connect it with the knowledge he or she already possesses. The teacher then carries out the job as educator with patience and care. Meanwhile no subject is taught for too long at a time to avoid boredom and tiredness.

'Make it your aim to develop the child,' says Pestalozzi to the teachers, 'and do not merely train him as you would train your dog, and as so many children in our schools are trained.' (From Vulliemin in de Guimps)

Concrete before Abstract - Things before Words
Pestalozzi was against the traditional style of teaching, which he found too formal and abstract. The child was for the most part a passive recipient of information and abstract ideas were taught without any concrete understanding, without direct observation and without direct involvement or experience of them. For example, children had to learn the catechism – a summary of the principles of the Christian religion used for religious instruction – by heart, but teachers did not try to give them a true understanding of faith, love and morality.

Pestalozzi believed that descriptions, definitions and explanations are useless unless the child already has an understanding of the world based on concrete experience, direct observation and active learning using real objects, resulting in sense-impression. Traditional education put too much emphasis on learning from books and encouraged people to talk about things they had never themselves experienced, without properly understanding what they talked about. As a result a love of talk began, talk which was often empty of thought.

Following Pestalozzi's method, children are encouraged to talk about what they have learnt only when sense-impression has led to a complete understanding of what is being taught and how the various things taught are related. Only at this stage are books used, abstract ideas introduced and the area of knowledge expanded beyond what is in the child's immediate experience.

Teaching through 'sense-impression' was one of Pestalozzi's most important contributions to education. This soon began to replace the traditional approach to teaching. A child's first ideas, formed by sense-impression, are so strong that the child is inspired to express them in words. It is much easier for the child to express ideas clearly and accurately when the desire to use language is combined with the complete understanding which comes about from concrete experience, active learning and sense impression. Thus sense-impression is the starting point of thought and language. Clear verbal expression of everything that the child understands through sense-impression ensures that the things learnt are thoroughly understood and registered by the child.

The Aims – Recognition of the Truth and the Reform of Society
In the tenth letter of 'How Gertrude Teaches her Children' Pestalozzi writes,

'In Europe the culture of the people has ended by becoming an empty chattering, fatal alike to real faith and real knowledge; an instruction of mere words and outward show, unsubstantial as a dream, and not only absolutely incapable of giving us the quiet wisdom of faith and love, but bound, sooner or later, to lead us into incredulity and superstition, egotism and hardness of heart. But however this may be, the development of the mania for words and books, which pervades our whole system of popular education, has undoubtedly taught us at least one thing, and that is, that it is impossible for us to remain any longer as we are.

Everything confirms me in my opinion that the only way of escaping a civil, moral and religious degradation, is to have done with the superficiality, narrowness, and other chief errors of our popular instruction, and recognize sense-impression as the real foundation of all knowledge.'

Pestalozzi believed that by basing education on sense-impression, children become attentive and observant and therefore able to fully understand all aspects of what is learnt, from all different perspectives. This prevents them from making any kind of biased judgement. An education based on sense-impression is, he says, the best way to avoid producing superficial and presumptuous talkers, who make false judgements because of their lack of true understanding.

Following Pestalozzi's approach, each individual learns to judge for himself or herself and thus gains independence of character. Therefore people no longer blindly follow others nor blindly follow the fashion of the time. Instead they recognise the truth, and live according to the truth, which is an ultimate goal of a Pestalozzi education. True liberty and true democracy follow and therefore the possibility of overcoming the degradation of society.

The Teacher

Pestalozzi's Analogy – The Teacher as a Gardener
Just as the development of a child is compared to the development of a tree, so the role of the teacher is compared to the role of a gardener. In his 1818 'Address To My House' (Yverdon) Pestalozzi explores the role of the teacher,

'...what is the true type of education? It is like the art of the gardener under whose care a thousand trees blossom and grow. He contributes nothing to their actual growth; the principle of growth lies in the trees themselves. He plants and waters, but God gives the increase. It is not the gardener who opens the roots of the trees that they may draw food from the earth; it is not he who divides the pith from the wood and the wood from the bark, and thus helps forward the development of the actual parts, from the roots right up to the outermost twig, and holds them together in the eternal unity of their being, thereby producing the final object of their existence – namely, the fruit. Of all this he does nothing; he only waters the dry earth that the roots may not strike it as a stone. He only drains away the standing water that the tree may not suffer. He only watches that no external force should injure the roots, the trunk, or the branches of the tree, or disturb the order of Nature in which the several parts combine to ensure the success of the tree. So with the educator: he imparts no single power to men. He gives neither life nor breath. He only watches lest any external force should injure or disturb. He takes care that development runs its course in accordance with its own laws.'

The teacher is a facilitator. The teacher provides a positive environment for learning, by stimulating the child, by causing the child to develop a love for learning and by directing learning in such a way that the child's innate powers can develop and the child can learn for himself or herself. The teacher supports the natural development of the child, to enable it to develop all its innate powers harmoniously. Therefore the teacher should always consider whether what he or she is doing in the teaching process is in accordance with the nature of the child. The teacher should avoid anything which goes against the child's nature.

Teachers and School should be as similar to Family and Home as possible
For Pestalozzi, the pre-school years are the most important. Before coming to school, the child should have developed trust in God, belief in human virtues and the desire to help fellow human beings. 'Home is the great school of character and citizenship' says Pestalozzi. The good home is the best place for education and the good mother is the best educator because these are the first things the child experiences and they are the child's first realities.
Therefore, the more like home school can be in its spirit and mood, the more successful it can be. Pestalozzi believed that school education could only work properly if there is a warm-hearted, open human relationship between teachers and pupils, as there is in a good home, between parents and children.

A peasant visitor, father of one of the pupils at the Burgdorf Institute, once said about the institute, 'Why, this is not a school, but a family!'

Pestalozzi responded,

'That is the highest praise you can give me. 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 helpful to education in so far as it develops the feelings and virtues which give the charm and worth to family life.' (From de Guimps)

John Ramsauer, a poor orphan who was trained by Pestalozzi at Burgdorf and became a very successful teacher, (he was finally appointed to be the tutor to the princes and princesses of Oldenburg), writes in his autobiography about his experiences at Burgdorf, when aged ten,

'The whole place was so simple and home-like, that in the half-hour's recreation which followed breakfast, Pestalozzi would often become so interested in the spirited games of the children in the playground as to allow them to go on undisturbed till ten o'clock. And on summer evenings, after bathing in the Emme, instead of beginning work again, we often stayed out till eight or nine o'clock looking for plants and minerals'. (From de Guimps)

Pestalozzi's Institutions were like families because Pestalozzi behaved like a father to everyone and lived for others, aiming to make the pupils feel like brothers and sisters in a large family, encouraging the staff to treat the students as equals and the children to feel affection and show consideration for each other, help each other, cooperate with each other and share their work. Pestalozzi's activity and love inspired the rest of the household, both teachers and pupils. This is shown in the following account of Yverdon by Eduard Biber, one of Pestalozzi's assistants,

'The pupils and teachers were united by that unaffected love which Pestalozzi, who, in years, was a man verging to[wards] the grave, but in heart and mind a genuine child, seemed to breathe out continually and impart to all who came within his influence. The children forgot that they had another home, and the teachers that there was any other world than the Institution. Not a man claimed a privilege for himself, not one wished to be considered above the others. Teachers and pupils were entirely united. They not only slept in the same rooms, and shared the labours and enjoyments of the day, but they were on a footing of perfect equality. The same man who read a lecture on History one hour, would, perhaps, during the next, sit on the same form with the pupils for a lesson in Arithmetic or Geometry, and without compromising his dignity, would even request their assistance and receive their hints.' (From Downs)

How things are taught rather than what is taught

Since children learn by example, the inner life of the teacher matters in the moral development of the child. Whatever is felt in the hearts and souls of parents and teachers is reflected in the child's heart and soul. Pestalozzi believed that the individual could only develop his or her humaneness and morality by face-to-face and heart-to-heart contact with others. Therefore education must be a personal process involving positive interaction between teachers and pupils.

During his time at Stans, one of the periods of his life when he felt the most fulfilled, Pestalozzi was by necessity everything to the children. He kept them clean, taught them, comforted them and nursed them. Most importantly he loved them. In fact, Pestalozzi introduced the idea of love in education and transformed education from a harsh and repressive discipline into tender and thoughtful guidance. It was very important that at Stans Pestalozzi had to do everything for the children and, even more important, that he did everything for them willingly. As a result, they developed dramatically in a very short period of time, into loving and caring individuals who wanted to do things for the good of others. This is demonstrated by their enthusiasm in asking the governor to invite more orphans to their home, despite knowing that their circumstances would become much harder as a result.

Pestalozzi's ideal teacher is expected to be an expert in his or her knowledge of the child as well as, but less importantly, in his or her subject area. In fact, the teacher is not seen as someone with extraordinarily superior knowledge, but more as an equal of the children's, living and working with them and learning with them.

'The schoolmaster should at least be an open-hearted, cheerful, affectionate, and kind man, who would be as a father to the children; a man made on purpose to open children's hearts and their mouths and to draw forth their understandings, as it were, from the hindermost corners.' (From Pestalozzi's book 'Christopher and Elizabeth')

How the teacher teaches is more important than what is taught in Pestalozzi's educational approach. A practical attitude of loving yet firm kindness, as demonstrated by the best of mothers, and the ability to kindle and cultivate the innate qualities of the child, as demonstrated by the best of gardeners, are more important than a detailed knowledge of the subject matter.

A teacher should recognise and respect each child's individuality, including not only his or her academic potential but also his or her emotional state and needs. The teacher should know the best way to motivate and encourage each individual, allowing each child to learn according to the stage of development he or she has reached. Most importantly, the teacher should respond to the child's emotions lovingly. Pestalozzi called this 'seeing love', which is selfless and involves complete understanding of and empathy for each individual.

In order for education to succeed, the teacher needs to bring 'heart' into every aspect of his or her teaching, loving not only the children but also the subject matter and the teaching and learning process.

So, the teacher should keep alive the child's interest in study; Pestalozzi believed that a child's lack of interest is usually the fault of the teacher. Students must be motivated by the love and enthusiasm the teacher feels for the subject and the teacher should make as much effort as possible to ensure that the child understands. The child responds to this loving and caring attitude and thus comes to love what he or she does, therefore putting his or her best effort into everything and fully engaging with whatever task is at hand.

Recognising that each child is an individual with different capacities, Pestalozzi taught that there should be no comparisons made between children and that competition should therefore be avoided. A child should only be expected to strive to do the best he or she is capable of as an individual.

The reward, for a child taught following Pestalozzi's approach, comes from the satisfaction of doing well and from the excitement and pleasure that comes about in learning when the learning experience is interesting and fully absorbs the whole person (head, heart and hands). When this happens, school marks and prize giving, which Pestalozzi did not approve of because he thought that they cause pride and fear, become unnecessary. His method ensures this; the starting-point, gradation and connection of each subject taught is so carefully adapted to the individual child, and the teacher is so involved, that the child takes part in learning with pleasure. The satisfaction in learning and discovering and increasing one's powers becomes stimulus enough to continue learning with enthusiasm.

Student Discipline

Pestalozzi gives the child as much freedom as possible, following the principle that 'life educates', but believes that firmness and discipline on the part of the teacher are also necessary to ensure that the child is properly directed, learns obedience and becomes capable of self-discipline and moral strength.

Therefore strict order was kept in Pestalozzi's institutions, in preparation for life. The school day was rigorous and, for example, no lateness was permitted, children had to be clean, neat and tidy, there was no eating during lessons and no pushing was allowed.

The teachers at Burgdorf and Yverdon kept discipline through their personal authority, which they achieved because they were honest and hardworking, loved the children and let the children see this love, respected them as individuals and had their best interests at heart. They were forbidden to humiliate, mistrust or lose their tempers with the children because Pestalozzi knew that pressure, threats and punishment only cause fear and resentment and prevent learning from taking place.

In his autobiography, Ramsauer writes,

'...in spite of his rough exterior, Naef [teacher of gymnastics at Burgdorf] was the chief favourite with the children, for the simple reason that, as he was never so happy as in their society, he was always with them. He used to play, drill, walk, bathe, climb, throw stones with them, just like a big child, and in this way gained almost unlimited authority over them. And yet he had nothing of the pedagogue [teacher] about him but the heart...' (From De Guimps)

Roger de Guimps, who was also a former pupil of Pestalozzi, writes of Burgdorf,

'The children's trust in their masters, their love and gratitude for them, took the place of rules and discipline; there were no rewards, and, except in very exceptional cases, no punishments; obedience was perfect because it was spontaneous. The children were lively and happy, they liked their lessons almost as well as their games, and it was not rare to see some of them stop in the middle of their play to go and work together before a blackboard or a map.'

School was made enjoyable. Pupils were full of good humour, taking such pleasure in classes that they worked with joy and enthusiasm. Therefore there was little need for punishment.

Only mild punishments were given for failing to obey the rules. Pestalozzi believed that children tend to do right if they are shown kindness, love and understanding. These were the usual means of discipline and the atmosphere was so cheerful, the children felt so supported in their learning and so keen to learn, that little punishment was necessary. Any punishment that did have to be given was made to fit the 'crime'. So, for example, a lazy child would be made to cut the firewood, a forgetful child would be made messenger for a few days.

The Importance of Staff Meetings
At Yverdon, staff meetings took place twice a week and were considered very important. At these meetings, each teacher gave an account of his lesson plans and of the character and behaviour of the children he had under his particular care. These meetings meant that teachers could correct mistakes and learn from one another's good ideas. They also meant that all the staff got to know the characters and habits of all the pupils. Krüsi, an assistant of Pestalozzi, found that 'these consultations tended to produce unity of feeling, thought and action among the teachers'.

Pupils Helping to Teach
Pestalozzi used some of his older, more able or quicker pupils to help him teach and found that these 'helpers' learnt more quickly as a result. Children, when helping to teach, find it natural to show consideration for those they teach and the ones being taught find it natural to be helped by other children. The atmosphere created by this approach is one of cooperation and peace and has the natural feel of a large family. It also helps the students to become independent.

Pestalozzi writes of his work at Stans,

'Just as in a family the eldest and cleverest child readily shows what he knows to his younger brothers and sisters, and feels proud and happy to be able to take his mother's place for a moment, so my children were delighted when they knew something that they could teach others. A sentiment of honour awoke in them, and they learned twice as well by making the younger ones repeat their words. In this way I soon had helpers and collaborators amongst the children themselves. When I was teaching them to spell difficult words by heart, I used to allow any child who succeeded in saying one properly to teach it to the others. These child-helpers, whom I had formed from the very outset, and who had followed my method step by step, were certainly much more useful to me than any regular school-masters could have been.' (From de Guimps)

The Need for Teacher Training
Pestalozzi created a teaching pedagogy (the method and practice of teaching, especially as an academic subject or theoretical concept) that has had enormous influence. He states that the science of education must be based on a thorough knowledge of human nature and calls it 'the most important of all branches of mature knowledge'. The teacher training that took place at Burgdorf and Yverdon and the number of practical teachers and organisations inspired by these places led to general acceptance that teacher training was practical and necessary.

Pestalozzi did not consider school teaching to be a highly skilled profession, but did believe that it is a profession requiring rare people of great integrity, understanding and intelligence. Since he considered it to be the most important as well as the most difficult profession, he believed that those who are by nature suitable to teach should be found and properly trained in the science of education in order to make teaching more effective and efficient.

Examples of Pestalozzi's Method in Specific Subject Areas

The Teaching of Number, Form and Language

Pestalozzi's ideas revolutionised education. He was the first educator to attach such importance to primary education, over which he has had, and still has, a particularly strong influence. His primary or 'elementary education' involves the all-round, basic development of the head, heart and hands of the child. This approach particularly concentrates on preparing the child for the life he or she is likely to lead. The child's mind is prepared for more advanced learning by teaching in three fundamental areas: number, form and language.

According to Pestalozzi, the 'path of nature' in learning combines these three elements: number, form and language. Making use of concrete experience and active learning in order to achieve sense-impression, instruction must observe 'three things: (1) [Arithmetic] to teach the child to look upon everything that is brought before him as a unit, e.g., how many and what kind of objects are in front of him; (2) [Form] to teach the child to recognize the appearance, form, or outline of objects; and (3) [Language] as soon as possible to make the child acquainted with all the words and names descriptive of objects known to him.' (From Downs)

Arithmetic – the teaching of number

Traditionally, the teaching of arithmetic taught children to do abstract sums but not necessarily to understand numbers. The success of Pestalozzi's method shows how important it is to teach arithmetic using real things rather than words.

Following Pestalozzi's method, the children only use figures after fully understanding numbers, including the ideas of grouping (addition and multiplication), separating (subtraction and division) and comparing (ideas of 'equal', 'greater' and 'smaller'), taught through sensory experience gained by using real objects.

Pestalozzi encouraged mothers to let their children learn to count with peas, leaves and any other objects found at home. A child can understand the idea of two balls if he or she sees the balls, but he or she cannot get the idea of 'two' in the abstract. Teachers were encouraged to continue the process, making use of the types of object found in the home and the child's immediate environment.

Pestalozzi also used tables, to clarify mathematical concepts. For example, 'The Table of Simple Fractions' contains ten lines with ten squares in each line, with each square in the last line divided further into ten small squares.

Pestalozzi showed that if children gain an understanding of numbers through the use of their senses and real objects, they can easily do sums, even quite complicated sums in their heads without writing anything down.

Form – The Teaching of Measuring, Drawing and Writing
Pestalozzi noticed that every child shows a taste for drawing and has the ability to draw. He therefore believed that drawing ought to be taught to every child. Drawing is one of the earliest things a child does because a child naturally wants to imitate what it sees around it. To encourage this tendency, Pestalozzi said that children should be given a variety of playthings to stimulate their interest and to help teach them to recognise the appearance, outline and form of objects.

Pestalozzi divides the teaching of form into 'the art of measuring, the art of drawing and the art of writing'.

He considers the art of measuring to be essential if the child is to learn to draw well, and says that children should be taught to draw lines, angles, rectangles and curves. Pestalozzi also emphasises the importance of drawing from life rather than copying another drawing. The former is more interesting and more pleasurable because the original has more life to it and the child can choose to draw what interests him or her in daily experience and the surroundings.

Drawing leads the child from vague perceptions to clear ideas. Pestalozzi writes that '...even in common life, a person who is in the habit of drawing, especially from nature, will easily perceive many details which are commonly overlooked, and form a much more correct impression, even of such objects as he does not stop to examine minutely, than one who has never been taught to look upon what he sees with an intention to reproduce a likeness of it. The attention to the exact shape of the whole, and the proportion of the parts, which is necessary for the taking of an adequate sketch, becomes a habit.' (From Holman)

Pestalozzi believed that a child could learn to write more easily after learning to measure and draw. He advises that the child first practise copying the simple form of letters, then move onto more complex forms and then to the combination of several letters. Alphabet blocks are used to help teach the letters. The child should firstly learn to write enlarged letters perfectly on a slate or using a pencil, and then to write enlarged letters with a pen. The letters should only be brought down in size gradually.

The Teaching of Language
Pestalozzi believed that, at as early a stage as possible, the child should be taught all the words and names needed to describe the objects he or she comes across. This is because a child can only become clearly conscious of his or her natural observations and impressions about number and form if he or she uses language to talk about his or her understanding. The ability to use language, like the ability to draw, leads the child from vague perceptions to clear ideas.

Pestalozzi calls language 'the gift that makes us truly human'. To use language positively, rather than in the negative way of discussing theories and making judgements without understanding, the child must have a complete understanding of what he or she is talking about. This is achieved through observation and sense-impression.

A former pupil of Yverdon, Professor Vulliemin, who became a famous historian, writes the following,

‘Speaking was taught by means of observation; we were taught to see things rightly, and in this way we obtained a correct idea of the relations of objects to each other. What we had grasped well we could express clearly without difficulty.’ (From Green (1))

Pestalozzi believed that the mother should encourage the child to first experiment with sounds, then to name all the common objects he or she sees daily, and then to describe his or her surroundings in as much detail as possible.

Pestalozzi would take the name of a certain thing, along with words that describe the qualities of that thing as the basis for a lesson. He would make the children memorise the names of important objects in nature or in their immediate surroundings. He would then ask the children to form sentences including the words in various ways.

He would use exercises of sense-impression and language (later called ‘Object Lessons’) to teach children to observe and to talk about their observations, recounting all the impressions they receive from the objects surrounding them which the teacher brings to their attention. If the object itself cannot be used, pictures of objects can be used instead. Pestalozzi thus introduced the idea of picture books for children.

A famous example of a language lesson taught by Pestalozzi is given by Ramsauer, who describes his method for teaching language as ‘the best thing we had’ and as ‘real practice in sense-impression’. In his autobiography, Ramsauer writes that Pestalozzi would ask the pupils to inspect a hole in the wall of the classroom, or a tear in the curtain. The pupils would describe the hole or the tear in ever-increasing detail, based entirely on their observations. For example,

‘“I see a hole in the paper.”
“I see a long hole in the paper.”
“Through the hole I see the wall.”
“Through the long narrow hole I see the wall.”

And continue to describe the surrounding paper,

“I see figures on the paper.”
“I see black figures on the paper.”
“I see round black figures on the paper.”’

(From de Guimps)

Following this approach, the child learns firstly to closely examine an object, then to talk about it in simple words, then to write about the object, and finally to read what he or she has written. As a result, the child’s words and sentences, which can of course be corrected by the teacher if necessary, are to a great extent the child’s own expression of his or her own thoughts.

For Pestalozzi, language lessons are also general knowledge lessons and vice versa. This is because a child gains sense-impression through direct observation and engagement of the senses, and the sense-impression thus gained ensures the development of accurate speech as well as forming the concepts of general knowledge.

An example of a general knowledge lesson which is also a language lesson and which ensures that the children learn by using their senses and by actively engaging with the object/s being taught about is the ‘Object Lesson on Glass’ which was developed by a follower of Pestalozzi’s, Elizabeth Mayo.

Object Lesson on Glass

An example of a class taught by Elizabeth Mayo. (From Mayo: 'Lessons on Objects', quoted in Green (1))

'Glass has been selected as the first substance to be presented to the children, because the qualities which characterise it are quite obvious to the senses. The pupils should be arranged before a blackboard or slate, upon which the result of their observations should be written. The utility of having the lesson presented to the eyes of each child, with the power of thus recalling attention to what has occurred, will very soon be appreciated by the instructor.

The glass should be passed round the party, to be examined by each individual.

Teacher: What is this which I hold in my hand?

Children: A piece of glass.

Tr.: Can you spell the word glass?
(The teacher then writes the word 'glass' upon the slate, which is thus presented to the whole class as the subject of the lesson.)

Tr.: You have all examined the glass; what do you observe? What can you say that it is?

Ch.: It is bright.
(The teacher, having written the word 'qualities', writes under it – 'It is bright.')

Tr.: Take it in your hand and feel it.
Ch.: It is cold. (Written on the board under the former quality.)

Tr.: Feel it again, and compare it with the piece of sponge that is tied to your slate, and then tell me what you perceive in the glass.

Ch.: It is smooth – it is hard. [Written on the board under 'qualities']

Tr.: What other glass is there in the room?

Ch.: The windows.

Tr.: Look out...[of] the windows and tell me what you see.

Ch.: We see the garden.

Tr.: (Closes the shutter) Look out again and tell [the class] what you observe.

Ch.: We cannot see anything.

Tr.: Why cannot you see anything?

Ch.: We cannot see through the shutters.

Tr.: What difference do you observe between the shutters and the glass?

Ch.: We cannot see through the shutters, but we can see through the glass.

Tr.: Can you tell me any word that will express this quality which you observe in the glass?

Ch.: No.

Tr.: I will tell you then... It is transparent. [Written on the board under 'qualities'] What shall you now understand when I tell you that a substance is transparent?

Ch.: That you can see through it.

Tr.: You are right. Try and recollect something that is transparent.

Ch.: Water.

Tr.: If I were to let this glass fall, or if you were to throw a ball at the window, what would be the consequence?

Ch.: The glass would be broken. It is brittle. [Written on the board under 'qualities']

Tr.: If I... [threw a ball at the] shutter in the same way, what would be the consequence?

Ch.: It would not break.

Tr.: If I gave it a very heavy blow with something very hard, what would happen then?

Ch.: It would then break.

Tr.: Would you therefore call the wood brittle?

Ch.: No.

Tr.: What... [things] then do you call brittle?

Ch.: Those which are easily broken.

These are as many qualities as would occur to the children at their first attempt: they should be arranged on the slate, and thus form an exercise in spelling. They should then be effaced, and if the pupils are able to write, they may endeavour to remember the lesson, and to put it down on their slates.'

Note: By handing the piece of glass round to each individual in the class, each child is made to exercise his or her own powers on the object presented.

The subsequent questions of the teacher aim at drawing out the ideas of the children. The teacher puts such questions as may lead to the exercise of the different senses.

Showing a contrasting quality in another substance is a useful way to demonstrate a quality.

Trying to make the children feel the want of a term to express the idea formed helps them to retain the term given. The teacher only provides words to describe the glass if the children are unable to do so and asks questions which ensure that the children become keen to know this new word.

The children should then use the new term in different contexts to ensure proper understanding of its meaning.

The lesson given is an example only and can be applied to any general knowledge/language class, and adapted to the children's abilities and the materials available.

Pestalozzi also experimented with the teaching of foreign languages. As with his other language teaching techniques, his ideas, now commonplace, were entirely new when he introduced them. He believed that the best way to teach a foreign language is to teach it in the way the mother tongue is taught. This means constant use of, and practice in, using the language. Pestalozzi states in 'Swansong' that,

'A child soon learns to speak a foreign language even from an illiterate person, who merely talks to him without any attempt at instruction; but he does not do this with a skilful teacher who adopts the mechanical grammatical method.' (From Downs)

For Pestalozzi, grammar, traditionally taught from the beginning, should be taught only after the child is able to fluently use language to describe his or her surroundings.

Further Expansion of the School Curriculum

Pestalozzi emphasised the importance of 'formative' or 'elementary education', by which he meant not so much definite instruction in specific subjects but rather the all-round preparation of the pupil's mind for more advanced learning. However, he was responsible for introducing a number of specific branches of learning to the school curriculum and today his influence is seen throughout primary, secondary and even tertiary level education.

Manual training and vocational education were considered to be very important by Pestalozzi. However, since the majority of pupils at Burgdorf and Yverdon were middle class, these subjects were given less stress at these institutes than they had been given at his industrial school for poor children at the Neuhof. However, the children did learn gardening and other skills such as bookbinding.

As already described, the children in Pestalozzi's Institutions learnt 'mental arithmetic' and drawing, as well as the new approach to language learning. They were also taught geography, science, music and physical education.

The following are examples of how Pestalozzi applied his method to the teaching of these subjects.

Geography
Pestalozzi's major principle in teaching geography, as in his teaching of other subjects, was to move from the near to the far. Children were only taught the geography of distant places when they had completely understood the geography of the area they lived in. First they studied the area round the school, then the neighbourhood, the canton, the country and finally continents and oceans.

Former pupil of Yverdon, Professor Vulliemin, writes the following about the teaching of geography at the institution,

'The first elements of geography were taught us from the land itself. We were first taken to a narrow valley not far from Yverdon, where the river Buron runs. After taking a general view of the valley, we were made to examine the details, until we had obtained an exact and complete idea of it. We were then told to take some of the clay which lay in beds on one side of the valley, and fill the baskets we had brought for the purpose. On our return to the Castle, we took our places at the long tables, and reproduced in relief the valley we had just studied, each one doing the part which had been allotted to him. In the course of the next few days more walks and more explorations, each day on higher ground and each time with a further extension of our work. Only when our relief was finished were we shown the map, which by this means we did not see till we were in a position to understand it.' (From de Guimps)

This is a good example of the way in which Pestalozzi children are actively involved in the learning process. The children are first taught to observe the country near to home by gaining sense-impression through concrete experience of the land itself. They then model the valley themselves. The children are only introduced to the abstract concept (the map) once they are fully ready to understand it as a result of their observations and experiences. The children feel a sense of ownership of the map because they first model it or draw it themselves and therefore have a real understanding of it.

The famous 19th century German geographer, Karl Ritter, who had great influence on the development of geographical science and whose work on comparative geography changed the subject into an organic science, writes that he left Yverdon 'fully determined to keep the promise...[he] had made to Pestalozzi of introducing his method into the study of geography'. (From de Guimps)

Ritter attributes his success to Pestalozzi and in doing so underlines the point made by Pestalozzi himself - that it is not so much what a teacher knows but how he teaches that is important,

Pestalozzi knew less geography than a child in one of our primary schools, yet it was from him that I gained my chief knowledge of this science, for it was in listening to him that I first conceived the idea of the natural method. It was he who opened the way to me and I take pleasure in attributing whatever value my work may possess entirely to him.' (From de Guimps)

Science
As in the teaching of geography, concrete experience and perception gained through sense-impression are important. Scientific education is therefore based on personal, first-hand observation.

Every child's natural environment offers opportunities for scientific observation. For example, he or she can see in the kitchen at home that salt and sugar dissolve in water.

Pestalozzi urges fathers to 'lead their children out into Nature and teach them on hilltops and valleys... Let the child realise that she [nature] is the real teacher and that you and your art have no other purpose than to walk quietly at her side. If a bird should sing or an insect should crawl on a leaf, stop your conversation immediately; the bird and the insect are teaching him [the child] more and better. You may keep still.' (From Biber quoted in Downs)

Pestalozzi's students went on field trips – walks in the woods and trips into the mountains. Field trips are commonplace today, but were new to education when Pestalozzi introduced them. The children discussed and drew trees, flowers, birds and the other things they saw.

The following description by de Guimps of a student trip from Yverdon to the Jura mountains shows that Pestalozzi connects different branches of learning; the teaching of science was thus connected with the teaching of geography and other subjects such as agriculture. Importantly also the description shows that a Pestalozzi education is enjoyable for the students and teachers alike.

'These excursions in the Jura were a source of great delight to us. They were arranged to suit the ages of the different classes, and as soon as I was seven I began to take part in them. Our masters... looked after us with almost motherly solicitude, making frequent halts to rest our little legs, refreshing us, when we were tired, with a few drops of spirit on a piece of sugar, and now and then, when the distance was too great, procuring some rustic conveyance for us, in which we would sing gaily as we passed through the villages, where the peasants often gave us fruit.

As soon as we got to the high mountain pastures under the pines, we lost our feeling of fatigue, and fell to playing games or collecting herbs and minerals. We often gathered at some good point of view to sing the wild, simple, Alpine melodies our masters loved to teach us. Today, after more than sixty years, I can recall these songs as clearly as in those early days when I first sang them, and they still seem very beautiful to me.

On return from these excursions, the pupils had to describe them either orally or in writing, according to their ages. There was generally a great deal to say, our attention was always carefully drawn to everything likely to prove instructive. These excursions were, in fact, practical lessons in natural history and geography.' (From de Guimps)

Music
Pestalozzi introduced music into the primary school curriculum because he believed that it was an aid to moral education. As with geography, Pestalozzi knew nothing about the science of music but he believed that the most important thing about it is the positive effect it has on people's feelings and the way simple music can cause happiness and bring about a feeling of benevolence.

In his autobiography, Ramsauer writes of Burgdorf,

'The thirty or forty children of both sexes of Pestalozzi's old school came from the town to the castle to take part in the singing lessons. Buss made his pupils sing as they walked up and down the big corridors of the castle, two and two, and holding each other's hands. That was our greatest pleasure…

Indeed singing was one of our chief sources of pleasure at the institute. We sang everywhere – out of doors, on our walks, and in the evening, in the court of the castle; and this singing together contributed in no small measure to the harmony and good feeling which prevailed amongst us.' (From de Guimps)

Physical Education
As part of his belief in the importance of the equal and harmonious development of mental (head), moral (heart) and physical (hands) capacities, Pestalozzi considered physical education to be very important. In his time, schools for the poor did not offer physical education because it was considered to be an unnecessary waste of time.

Pestalozzi believed that physical education is a necessary part of a child's overall development. He describes how the mother teaches the child, for example, to stand and to walk, and later how the father teaches the child, for example, to jump and climb, throw and swing. He goes on to describe how the children then have to go to school where they 'are barely allowed to twitch. That which is being done for their minds is given such unnatural importance that if a child so much as moves its hands and feet it forces the poor schoolmaster off the rails'. (From Pestalozzi's treatise 'Concerning Physical Education')

Pestalozzi believed that children need movement because it is natural to them and he therefore included physical education in the school curriculum. He also recognised that physical education – gymnastics, games, hikes – not only makes children stronger, happier and healthier but also helps develop moral qualities like perseverance and courage along with a united spirit.

Conclusion

Although largely unidentified, Pestalozzi's approach has had massive influence on education, indeed probably greater influence than any other individual's approach has had.

For example, Pestalozzi's influence is clear in the importance now put on:
The interests and needs of the child
A child-centred rather than teacher-centred approach to teaching
Active rather than passive participation in the learning experience
The freedom of the child based on his or her natural development
The child having direct experience of the world and the use of natural objects in teaching
The use of the senses in training pupils in observation and judgement
Cooperation between the school and the home and between parents and teachers
The importance of an all-round education – an education of the head, the heart and the hands
The use of systemised subjects of instruction, which are also carefully graduated and illustrated
Learning which is cross-curricular and includes a varied school life
Education which puts emphasis on how things are taught as well as what is taught
Authority based on love, not fear
Teacher training

Pestalozzi's influence over the spirit, the methods and the theory of education has continued into the twentieth and twenty-first centuries and most of his principles have been assimilated into the modern system of education.

(by Dr Joanna Nair)

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