

# The Significance of the Cultivation of Craftsman's Psyches in the preschool stage

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**Abstract** - Craftsman's psyches are the psychological quality needed by the development of contemporary society. Anyone who wants to adapt to society and make achievements in society should have a craftsman's psyche. This shows that it is very important for individuals and society to cultivate craftsman's psyches of people. The preschool period is the critical period of cultivation of craftsman's psyches, which would have a very important impact on one's whole life. Therefore, it is very important and critical to take effective measures to cultivate children's craftsman's psyches in the preschool stage.

**Keywords:** Famous Craftsmen; Craftsman's Psyches; Preschool period; Critical period.

## I. INTRODUCTION

With the steady development of the social economy, especially the transformation and development from an extensive economy to an intensive economy[1][2][3][4], the importance of craftsman's psyches for individuals and society has become increasingly prominent[5][6]. For society, many talents with craftsmen's psyches are needed; for individuals, only by continuously cultivating and strengthening their own craftsman's psyches can they adapt to society and have a stage to play their role in the society[7].

From China's situation, with China's transformation from a big manufacturing country to a powerful manufacturing country and from made-in-China to intelligent-manufacturing-in-China, more and more talents with craftsman's psychological quality are needed[8][9][10]. From the world situation, with the advent and development of information society[11][12], the need for the talents with craftsman's psychological quality are increasing in quality and quantity. Therefore, if an individual wants to adapt to the growing social and find

a platform for developing and giving play to his self-development and social development value, the craftsman's psychological quality is an essential condition for him. That is to say, craftsman's psyches are very important and necessary for both society and individuals. Craftsman's psychological quality is necessary for anyone who wants to adapt to the society in the fast-developing society, have a foothold and ample scope for displaying abilities, and have a platform to realize self-value and social value to realize the coordinated development of self and society[13]. Therefore, it is necessary to carry out the education of craftsmen's psyches to cultivate their craftsmen's psychological attainment. The cultivation of craftsman's psyches should be carried out as early as possible. The earlier the training, the easier it is to cultivate, consistent with the rule of individual psychological development. Therefore, craftsman's psyches should be the content of early education, especially preschool education.

The practice of daily life and the research in psychology, pedagogy, and many other disciplines show that pre-school is the key period of individual psychological development. Many of the most important positive psychological qualities, including craftsman's psyches, are formed and developed in this period. It can be said that the formation and development of children's psychology in pre-school is fundamental and critical for the development of whole individual life.

## II. THE CONCEPT OF CRAFTSMAN'S PSYCHES

Craftsman's psyches are necessary for success and an important part of the core competencies that contemporary people should and must have. Thus, it is necessary to cultivate people's craftsman's psychological attainment, which should become an important task of all kinds of schools at all levels, especially true of preschool education. The reasons are that: (1) pre-school period is the key



period for the formation of Craftsman's psyches, in which period many Craftsman's psychological qualities are formed and developed; (2) the earlier the cultivation of craftsman's psyches is, the easier it is, and the sooner, the better. To cultivate students' craftsman's psychological quality, we must first clarify the concept of Craftsman's psyches. It is necessary for clarifying its concept to clarify the concept of craftsman.

An artisan can be called an artisan or joiner, which refers to the person who focuses on a certain field, devotes himself to the product development or processing process in this field, strives for perfection, and completes every link process meticulously. Craftsmen appeared at the end of primitive society in the history of human society. With the development of human society, to the end of the primitive society, the second social division of labor began to appear. The handicraft industry separated from agriculture, and there appeared personnel specialized in handicraft production. They have a certain craft or skill, who are called craftsmen. They are engaged in a wide range of occupations, including all aspects of human life, such as shoemaker, carpenter, bricklayer, stonemason, dressmaker (tailor), cobbler, shaver, shipbuilder, blacksmith, dyer, painter, sculptor, cook, teacher, and so on. In modern society, craftsmen usually refer to those who master certain skills, have certain expertise, and rely on their expertise or skills to support their families and realize their self-worth. They are generally called great masters and technicians. In a word, a craftsman is a man of special skill.

However, the craftsman in the mind of the craftsman's psyches here is not a general craftsman or artisan, but a skillful craftsman or a famous craftsman, that is, a craftsman with excellent skills, outstanding expertise, high technology, and remarkable achievements. For example, Gongshu Ban in the Chinese Warring States Period is known as the earliest ancestor of Chinese civil craftsmen. He once made "Gouqiang" for boat warfare, delicate machines such as hobbyhorse cars and flying kites invented various practical wooden tools such as tri square, carpenter's ink marker, plane, chisel and saw, etc., and tools that had a great impact on people's lives, such as grinding, scrunching, lock and umbrella, etc. Mozi, the founder of Chinese Mohist Thought, is an expert in

equipment manufacturing. He was the first to make kites and to study pinhole imaging in the world. There is foreign example is Edison, Harrison, Watt and so on. These people have the psychological qualities that ordinary craftsmen don't have. It is the reason that they had these psychological qualities so that they have made achievements that ordinary people can't do. These psychological qualities are craftsman's psyches.

Today, the concept of craftsman and famous craftsman has been expanded to refer to those skilled people from all walks of life. In today's society, famous craftsmen refer to those who have made great achievements in all walks of life because of their superb skills. These influential craftsmen have made remarkable achievements in their respective jobs. For example, Feng Hongchang, a part-time vice chairman of Fujian Federation of trade unions and winner of the China skills award, feels extraordinary things in ordinary jobs because of his superb skills. "Worker academician" Li Wanjun excels in welding technology and finally becomes a famous welding craftsman in that he has made great achievements in the "humble" welding job. The "number one technician" Xu Qijin, with low education level, no higher education, no specialized knowledge, and professional training, worked and studied hard, devoted to his job, and made constant innovation, so that he finally became a technical expert and skill expert in the power industry.

There are still many famous craftsmen like Feng Hongchang, Li Wanjun, Xu Qijin and so on in today's China. They have no prominent background, no high education, no special training, no important position, but only in ordinary jobs. So how did they become famous craftsmen? What they rely on is that they have the psychological quality of famous craftsmen. This shows that whether one can become a famous craftsman depends not on his job or occupation, whether he has received higher education, special training, and so on, but mainly on whether he has the psychological quality of becoming a famous craftsman. This also tells us that anyone can become a famous craftsman as long as he has the quality of famous craftsmen. From the experience of many famous craftsmen, it can be seen that great craftsmen are made after born, and the process of cultivating great

craftsmen is the result of the interaction of their cultivation and training, others' teaching and training, and the opportunities provided by social development. Since they are made after birth, famous craftsmen can be cultivated, which is an educational process. The earlier the process, the better. It's better to carry out in early education. In this way, they can mature as soon as possible.

Craftsman's psyches are not ordinary craftsmen's or craftsmen's psychological quality, but a famous craftsman's psychological quality. Famous craftsmen can do what ordinary craftsmen cannot do because they have excellent psychological qualities that ordinary craftsmen do not have. In other words, their excellent psychological quality is the indispensable prerequisite or psychological source for their achievement, both to realize self-value and personal social value.

The psychological quality of famous craftsmen includes the psychological quality that all famous craftsmen have, that is, the common psychological quality of famous craftsmen, and the specific psychological quality that famous craftsmen in different fields or occupations differ from one another, that is, the psychological quality that distinguishes different industries, occupations, and types of famous craftsmen. All famous craftsmen's common psychological quality is the definitional features of famous craftsmen, which must appear in every famous craftsman[14]. The characteristics of different types, occupations, and even different craftsmen are called the characteristic or descriptive features of famous craftsmen, which can also be called the specific features. They often appear in famous craftsmen's specific examples, but not necessarily in all famous craftsmen[14]. The definitional characteristic of famous craftsmen is the essential attribute or characteristic of famous craftsmen. It is the essential regulation of famous craftsmen's concept, that is, the essential definition of the concept of famous craftsmen. The relationship between concepts, defining features, and their rules can be expressed by the functional expression:  $C = R(X, Y, Z, \dots)$ . That is, C is the function of X, Y, Z,..... C is the concept, X, Y, Z, And so on are the defining features, and R is the rule to integrate these features. Among them, definitional features are the necessary conditions to form a concept, but they are scattered like quicksand and cannot

become a concept in the absence of rules. The rule is the abstraction of feature relation, which is the higher generalization level [14][15]. The same is true of the concept of a famous craftsman, which is different from the general craftsman and has its essential attributes or definitional characteristics. Compared with the upper concept craftsman, the essential attributes or definitional characteristics of famous craftsmen are the specific characteristics or personality (descriptive) characteristics of famous craftsmen, which are different from those of the general craftsman.

### III. THE SIGNIFICANCE OF PRESCHOOL AGE TO THE CULTIVATION OF PSYCHES

#### A. The Importance of the First Stage of Human Life Cycle to Human Development

The human individual's life cycle is the whole process from the formation of life (sperm and egg combine to form fertilized egg), pregnancy, birth, growth, aging to death, which is the whole process from inoculation to the cradle to the grave in vulgarly speaking. In short, it is the process from birth to death.

The whole life cycle of humans can be divided into different stages. In *Huangdi's Canon of internal medicine(Huangdi Neijing)*, men and women are severally divided into every seven and eight years as a stage, which is the meaning of "women see seven, men see eight." Its meanings are that there is a big change every seven years for girls and boys every eight years. The book of *Changes(Yijing)* divides people into every nine years as a stage, which means that there will be a big change every nine years in the process of human development. Despite the division of *Huangdi Neijing* and *Yijing* that respectively divide human beings' development process into every seven years, eight years, and nine years as a stag, they all think that the first stage is very important for human development beings. Most of the first stage is in the preschool period. Therefore, preschool education is very important for human development. A good education at this stage would lay a good foundation for people's future development. The same is true for the cultivation of craftsman's psyches. It is relatively easy and important to take appropriate ways to cultivate people's craftsman's psyches in the early educational stage.

The research results of Liu Chengyi[16] and others

show that sperm and egg's combination to form a fertilized egg marks the beginning of an individual's life. Since the fertilized egg, with the growth and development of an individual, the total energy expenditure(TEE) per day increases. When it reaches a certain value, a person should start to work. His age is mature working age(MWA), that is, the age when he should start to work. In other words, this age is the age when a person should take part in work. It is to say that when anyone reaches this age, he should take part in work. After this age, it further increases, reaching the peak in one's life. At this time, one's age is the best working age(BWA), which age is the age at which one can make achievements the most possible in one's life. That is to say, by a certain period of work, the work becomes more and more mature. After the accumulation of work, the achievements that people can achieve in their life begin to appear. This age can be called achievement age(AA). If the individual has not made achievements at this age, it is very difficult to make achievements later.

After that, TEE is decreasing year by year. When it is reduced to a certain extent, equivalent to the TEE of MWA, usually people should retire. So this age can be called retirement age(RA). General ideal life cycle, MWA, and RA are symmetrical about AA[17]. According to the calculation of evolutionary medicine and life cycle, people's interest in their careers comes from preschool. Preschool children's interests determine the direction of their whole life, and the psychological quality or characteristics they form play a key or even decisive role in their achievements in life. Studies have shown that music training's effect depends on the starting age, and the effect is getting worse from 5 to 7 years old[18]. The age at which amateur sports schools and traditional opera begin to learn is also in the preschool period.

#### ***B. Preschool Period Is the Key to the Cultivation of Craftsman's Psyches***

Some people calculate and analyze from the perspective of the evolution of the human life cycle and find that the famous craftsman's first activities start from preschool. For example, Harrison's interest in watches and clocks began at the age of 6, and Jobs's interest in electronic products began at the age of 5.

According to Harrison's biography, when he fell ill in bed with smallpox as six years old, his family gave him a

watch to play with. He spent several hours listening to the tick and studying its mobile components, thus becoming very interested in the watch.

Steve Jobs lived 56.61 years. According to the function formula, the age of his interest beginning was 5.04. It was at the age of five that his adoptive father's superb skills attracted jobs. In Jobs's mind, his adoptive father "has a lot of talent in his hands. He could repair anything well, take apart any mechanical object, and then install it. he often asked me to take things apart and assemble them." [19] Under his adoptive father's influence, Jobs began to be attracted by electronic products, fiddle with some electronic devices, and thus had a strong interest in electronic devices, which laid a solid foundation for his future achievements.

From the above growth experience of Harrison and Jobs, the interest and psychological quality they developed in their childhood played a very important role in becoming famous craftsmen. It is the facilitation and support of the psychological quality formed at this time, and they continue to develop and eventually become the world's giants. Like Harrison and Jobs, many famous masters' achievements are closely related to their psychological development in their infancy. Therefore, it can be said that the development of pre-school children is very important and the key to the cultivation of craftsman's psyches. Therefore, to cultivate a large number of talents with craftsmen's psyches, especially applied talents, we must pay attention to early education or pre-school education.

#### **IV. "THREE YEARS OLD TO SEE THE ADULT, SEVEN YEARS OLD TO SEE THE OLD" SHOWS THE IMPORTANCE OF PRESCHOOL TO HUMAN DEVELOPMENT**

As the saying goes: "three years old to see the adult, seven years old see old." It means that in a three-year-old, we can see how one looked when he grew up; in a seven-year-old, we can see what one can accomplish in his whole life. In other words, from birth to three years old, children have developed some basic qualities of personality, which have a great influence on their future development, and the influence lasts until adulthood. When children are seven years old, they have formed the main psychological qualities they should have as a person.

Although these qualities may change in the future, they would have an indelible impact on the development of people's whole life. Although this sentence is an old saying and not necessarily correct, it emphasizes the importance of early development, just like cognitive development theory and personality development theory in psychology. It tells people to pay attention to children's early education. Because the younger the child, the more plasticity and development possibilities, so the earlier a good education, the more likely it is to tap the development potential of people; on the contrary, the later the education, the more difficult the education, the worse and the littler the education effect. This is the reason that people often say, "don't let children lose at the starting line." So is the cultivation of famous craftsmen. That is to say, to cultivate famous craftsmen, children should be trained from childhood to have the psychological quality of famous craftsmen, not when they grow up. If children grow up, it's too late in training them to become famous craftsmen. From this point of view, the sentence "three years old to see the big, seven years old to see the old" reflects the general law of people's early development. In addition to telling people to take effective education measures and ways early, it also tells people that different early education stages have different education contents, ways, or approaches. The education contents, ways, or approaches should be appropriately selected according to the level or characteristics of children's physical and mental development.

The above analysis shows that "three-year-old to see the adult, seven-year-old to see the old" mainly look at the psychological and behavioral quality of preschool children. "three-year-old to see the adult" means that from the psychological characteristics, behavior habits and personality characteristics of children at the age of three, we can see children's development state of psychological attributes and personality when they grow up. In other words, the level of individual psychological development at the age of three indicates the trend of his psychological development. To a certain extent, he restricts what kind of person he would become when he grows up. "Seven-year-old to see the old" is the same as "three-year-old to see the adult," but its influence is on one's life-long influence, that is, the psychological

development at the age of seven restricts one's life-long development to a great extent. Before the age of seven is the period of generalized preschool education, and from the age of three to seven is the period of strict preschool education. This shows that preschool education is in a very important position in the development of people. Before the age of seven is the most rapid development period of individual mind and physiology (body). In this period, individual mental and physical development directly affects and even determines the development of one's whole life to a certain extent. If one develops well in this period, it can lay a solid foundation for the individual's future development. If one develops bad in this period, it would greatly negatively impact his future development. If some bad traits are formed, it would be very difficult to change them. As the saying goes, "the country is easy to change, but the nature is hard to change," "What one forms as a child is like human nature, habit is like nature," the combination of the two sentences can see the importance of individual development in preschool. Existing studies have shown that the pre-school stage is the key period of cultivating craftsmen's psyches, and many qualities of craftsmen's psyches are formed and developed in the pre-school stage.

From the perspective of intelligence development, American psychologist and educator Benjamin Bloom (1913-1999) shows that the speed of intelligence development of an individual is gradually slow from birth to adult. Among them, the intelligence level of an individual develops rapidly in the first four years of life. By the age of 4-5, the intelligence level of an individual reaches 50% of that of an adult; by the age of 7-8, the intelligence level of an individual reaches 80% of that of an adult; and the remaining 20% develops after the age of 7-8.

From the perspective of brain development, the pre-school period is the key period of brain development. During this period, the brain's weight increases rapidly, and the speed of establishing neural connections is also very fast. The brain weight of normal adults is about 1.4 kg. The brain weight of the newborn is generally about 0.39 kg. At the age of nine months, the brain weight of the infant increases to about 0.66 kg. At the age of one, the brain weight is twice that of the newborn, close to half of

that of the adult. At the age of two, the brain weight increases to 1.05-1.15 kg, which is about 75% of the adult population. At the age of four, the brain weight reaches about 1.26 kg, which is about 90% of the adult population. At the age of seven, the brain weight is almost the level of the adult.

There are about 100 billion brain cells in terms of neural connections, also known as neurons, in the newborn's brain, but these brain cells rarely establish neural connections with each other. In infancy, with the interaction between children and the environment and people around them, under the effect of various external stimuli, and the growth of nerve cells and continuous interaction of neurons with each other, synapses are formed gradually between dendrites and dendrites, dendrites and axons, dendrites and cell bodies, axons and axons. By synapses, neural connections are established, and a neural network system is formed. The more connections between nerve cells, the more complex the neural network, the stronger the brain function, and the higher intellectual development level. This is because any psychological activity results from the whole activity of the network formed by the interaction of multiple nerve cells. Psychological activity is the "neural interaction" in the change matrix of nerve cells; nerve cells are interconnected to form a neural network that intersects and correlates with each other, and this network will produce many "diffuse local changes"[20][21] under the action of the force. James, the founder of American native psychology, uses "brain channels(Nao-Dao)" and "hook" to illustrate the influence of neural connections on intelligence. He believes that people's intelligence, especially their memory, is closely related to the number of "brain channels" or "connections" in their brains. "A person's memory is strong, partly because he has more brain channels than others, partly because his brain channels can last longer than others." [21][22] "Brain channels," said James, is a temporary neural connection. The large number of "brain channels" means a large number of temporary neural connections, the persistence of "brain channels" refers to the consolidation of temporary neural

connections. The number and persistence of brain channels depend on individuals' spiritual experience[21][22]. "One fact is more and more connected with other facts in mind, the easier it would be kept in our memory. Each join becomes a hook so that the fact can be hanged on. When the fact sinks below the surface, we can hook it up one by one. These hooks, taken together, form an interconnected network structure. With this net, this fact can be woven into the whole brain tissue of our thoughts"[21][22].

Connectivism cognitive psychology believes that human information processing depends on neural connection. Information processing adopts a way similar to neuronal connection, which uses a single neuron in a cooperative and parallel way[23]. The researches on the neural mechanism of human emotion show that the complexity of human emotion and the development of emotional ability depend on neural connections[24][25][26]. Neuroscience research shows that people's intelligence level is more determined by the number of neural connections. Group coding theory and module theory of cognitive neuroscience emphasize the importance of neural connection[27]. Therefore, to make people smart, we must increase the neural connections in people's minds and make them stable. The preschool period is the key period for the establishment of neural connections. During this period, the more and stronger the neural connections of infants' brains are established, the smarter they are and lay a solid foundation for their future development.

From the individual psychological development point of view, with the development of the nervous system, 9-month-old infants and their parents have gradually begun to establish more complex psychological links, such as speech, emotion, behavior, etc. At the age of 2.5-3, the psychological activities of infants develop rapidly, and their actions have randomness. In addition to the normal emotional response, they begin to produce a more complex emotional experience, and their self-consciousness begins to appear and develop. At the age of 7, children's self-awareness has been developed, and

image thinking has begun to occupy a dominant position, logical imagination is rich, emotional experience is more profound. This determines that preschool education is very important for individual psychological development. A good preschool education would lay a solid foundation for the future psychological development of infants.

On the contrary, if preschool education is not well done, it would seriously affect the development of children. In this case, what should preschool education teach? Preschool education does not focus on cultivating children's knowledge, and skills as primary and secondary schools do. We should cultivate infants with good personalities or healthy personality, good behavior habits, develop intelligence, and cultivate their positive psychological quality, especially the psychological quality of Chinese culture. That is to say, and a good preschool education should cultivate infants' self-confidence and happy personality, significantly improve their interpersonal skills, cultivate their sense of responsibility, and enable infants in the future life development to have responsibility, courage, ability, strong tolerance, and Hua-gong, and strong psychological ability of anti-frustration. But these are exactly what our country's preschool education lacks. It is necessary to change this situation, which requires preschool education reform, turning preschool education to shape the basic character of infants, stimulate the potential of infants, cultivate and develop infants' language, space, music, movement, cognition, and mathematical logic and other intellectual abilities. Among them, craftsman's psyches are a very important aspect. Only in this way can preschool education adapt to social development needs, lay a solid foundation for the cultivation of talents with craftsman's psyches, and promote the reform and development of the whole education from the initial stage or source of education.

## V. CONCLUSION

Craftsman's psyches refer to the psychological quality of famous craftsmen.

The Preschool stage is the key to cultivate craftsman's psyches.

It would affect one's whole life to cultivate craftsman's psyches in the preschool stage.

## ACKNOWLEDGMENT

This work was supported by (1) "Research on preschool education model based on the cultivation of ingenuity," the characteristic innovation projects (education and scientific research) of colleges and universities in Guangdong Province (Grant number: 2017GXJK191). (2) "Research on Mental Health Education Based on Huineng Xinxue," Guangdong Provincial Key Disciplines(Grant number: 2019058). (3) "Applied Psychology," Characteristic Specialty, Teaching quality, and teaching reform project of Guangdong Province in 2020 (Grant number: 490).

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