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# The role of education in human nature and future human design according to Edgar Morin

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### Abstract

Understanding the structure of human nature is an important element in determining educational practices. Recent developments in the field of science, culture and technology today require us to reconsider the developments and changes in human nature. Therefore, while determining the qualifications and principles that should play a role in the education of the future, it is necessary to first evaluate how human that is both the subject and object of education in perceived in the 21st century. While all the disciplines are essentially examining human being from different perspectives and trying to understand its nature, Edgar Morin, a contemporary philosopher and sociologist, considers the issue from a different perspective and thinks that the reality of human nature can be reached only when the disciplines are considered as a whole. Morin, who thinks that uncertainties will be clarified with an integrated education, has suggestions for the education of the future.

Keywords: Edgar Morin, philosophy of education, education of future, human nature.

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# 1. Introduction

Born in Paris in 1921, Edgar Morin is one of France's leading contemporary thinkers. Morin, who is a philosopher and sociologist, is known for his interdisciplinary studies. He paid particular attention to the subject of human nature and advocated that human nature must be understood in order to advance in every field. Morin put forward the idea of reform in the complexity of the world and carried out studies on it. He focused on developing the necessary prerequisites to face basic and global challenges. Today, he is known as a planetary thinker (Wise-Qatar, 2017). The renowned philosopher and sociologist known internationally for his work on complexity and 'complex thinking' has also gained recognition for his scientific contributions to various fields, such as politics, sociology, ecology, visual anthropology, education, biology of systems and media. Morin has more than 60 books. Although he is not much known in the US because of the limited translation of his books into English, he is well known in French-speaking countries and in Europe. Morin, the President of UNESCO Complex Thought, is known as the founder of transdisciplinarity (Upclosed, 2017). Morin conducted studies on contemporary sociology. He designed anthropo-social complexity with its dimensions of imagination and biology. He defined the basic problems experienced today and suggested ethical solutions. He worked on a method to combat complexity. His method does not include only scientific knowledge. According to him, the applicability of this method to human, society and social issues is important. Edgar Morin made suggestions on thought reform (Morin, 2005). The current study will focus on human nature from Edgar Morin's view, the reasons for not fully understanding it and the related suggestions for solution and the suggestions for the education of humans of future.

# 2. Understanding human nature according to Edgar Morin

According to Edgar Morin (2012), today's people are detached from the nature. He is of the opinion that man has the habit of dividing everything into pieces. The way of thinking that disintegrates everything into pieces has separated man from nature, and thus from its own nature. What naturally exists in man is also referred to the Biology Department in universities in today's world. Humanities studying human beings are only concerned with the cultural side of human beings. Today, as a result of the separation of man and nature, man has become alien to its own nature. On the other hand, in order to clarify the nature of the human being detached from its own nature, there has been a tendency to explain human behaviour by reducing it to the behaviour of chimpanzees and ants.

Morin thinks that man's being seen as the only entity in the universe might have been influential on the detachment of man from its own nature. The ideology, which sees man as an isolated entity from other beings and objects, applauds man's destruction of nature by ignoring that man is a part of nature. However, the destruction of nature means the destruction of human beings. Therefore, according to Morin, the idea that takes man away from its nature and leads to its self-destruction needs to be changed. The view that sees man apart from nature and tries to make it the master of nature must be abandoned because the desire of man to dominate nature has led to its deterioration. Man's destruction of nature as a result of its desire to dominate it, which has caused the deterioration of the side of man that is dependent on nature. This idea, which represents the wrong side of humanism, has led the West to consider that western man is superior to other people in the world as well as the idea that man has the right to dominate nature. Therefore, Morin argues that the thoughts that detach man from its nature produce results that lead to the catastrophe of humanity (Morin & Ceruti, 2014).

Morin (2012) states that although people have different cultures, humanity is only one. He argues that people exhibit different characteristics and at the same, time has a common nature. He looks at human nature more from a biological point of view. There is a potential for mating between men and women, regardless of what nations people are from. The genetic unity of the human species refers to anatomical, physiological, morphological and cerebral unity. There is also unity in emotional and psychological terms. Although laughter and tears are experienced in different situations in different

cultures, they are in fact universal reactions. People have created a variation in the world. People's appearances and physical characteristics are very different from each other. Culturally, they are in a state in which they cannot understand each other. People's rituals and beliefs vary greatly according to their culture. Nevertheless, there is reason everywhere, inventions are made, dance and rhythm exist and universal feelings are seen all over the world. Although there are many factors that differentiate them, their universal features help to make sense of human nature (Morin & Ceruti, 2014).

Edgar Morin believes that human beings are biological, physical, psychic, social, historical and cultural entities. According to Morin, the structure of human nature has been made more complex as it has been divided into parts to be addressed in teaching by specific disciplines. Therefore, today it is impossible to teach what the existence of human being really means. According to Morin, everyone should have the knowledge of his/her own complex identity and be aware of the common identity he/she shares with other people (Morin, 2013).

Today, Morin argues that man has become an isolated concept. He says that the concept of human being is not dying, but it is detached from nature and its own nature (Morin & Ceruti, 2014). According to Morin (2012), human beings idolise themselves with admiration for their rationality, and this has to end as soon as possible. His greatest criticism of human nature can be seen as the fragmentation of man while trying to be understood. The lack of a holistic view of man makes it difficult to understand. However, man is not a living being composed of independent parts. In order to understand man, it is necessary to see it as a whole. According to Morin, man is not a simple creature, but a complex being.

Morin believes that the approach to simplifying man has come to an end. He is of the opinion that conceptions that try to get to know the human being only in the cultural dimension, ignoring that it is a living thing have to change because for human nature to be understood it needs to be considered biologically. According to Morin, biology and culture must be in reciprocal interaction. But after ensuring this interaction, human beings should be multi-dimensionally evaluated. Morin, who sees human beings as a complex entity, considers it necessary to approach with the logic of complexity in order to understand human nature (Dincer, 2006; Erdem, 2012; Morin, 2012; Morin & Ceruti, 2014).

Morin advocates a multi-dimensional approach to addressing human science as a whole. According to him, it is possible to make sense of human nature through the interaction of four systems. Anthropological integrity can be achieved by considering the genetic system, brain, socio-cultural system and ecosystem together. He expressed the connections between these systems as shown in Figure 1 (Morin, 2012).



Figure 1. Anthropological integrity [Source: Morin (2012)]

According to Morin (2012), it is possible to use Figure 2 to understand everything about human beings. This approach can also be used to understand human behaviour. Accordingly, human behaviour is built on genetic, cerebral, social, cultural and ecosystem foundations. Morin assumes human science as multi-centred. Being a complex entity, the human being cannot only be considered culturally or genetically. The nature of the human being consists of interrelations and reciprocal relationships and additions taking place in the multi-centeredness.

Morin's scheme also includes another multi-centeredness consisted of species, society and individual. Species dimension is referred to biology, individual dimension to psychology and society dimension to sociology. The separation of these three dimensions makes it difficult to understand man. It is stated that the human reality is sometimes species-specific, sometimes individual and sometimes social. Morin argues that here is also a simplification, and opposes this. According to him, considering these dimensions separately will not help understand human reality. However, if these dimensions are considered by their mutual relations, it will be possible to understand human being.

The dimensions of species, individual and social that could be considered to make sense of human reality are complementary on the one side yet contradictory with some uncertainties on the other. In addition, according to Morin (2012), human uncertainty is three-dimensional. These are goal, real and self. But, he states that it is unknown whether these are in species, individual or society. Morin states that it is not known whether species and society are at the service of individual, society and individual are at the service of species, or individual and species are at the service of society. From this, he suggests that species, society and individual cannot be put in a hierarchical order. Morin indicates that the relationship between species, individual and society should be seen as uncompromising, competitive, discontinuous and complementary.

A centre has an important place in the complexity and multi-centricity of human nature. This centre is the brain that occupies a special place in man. Morin calls the brain the greatest of organs, but does not see it as just an organ. According to Morin, 'the brain should be considered as a centre that organises the whole of bio-anthropolo-sociological confusion'. The brain interacts with the genetic system, ecosystem and socio-cultural system. In other words, the brain is in communication with the species, individual and society dimensions that show the complexity of human nature. The central position of the brain in the multi-centricity is shown in Figure 2 (Morin, 2012).



Figure 2. The position of the brain in the multi-centricity [Source: Morin (2012)]

For the individual, the brain is a central system and has the capacity to organise. In addition, the brain also has the potential to organise culture and society. The brain is not only an organ, but it also

has an important place in terms of social structure. Morin says that the human science is simplified by only being considered in terms of culture and he sees incorporation of biology in the development of human science through the brain as important (Morin, 2012). In order to understand the complexity of human beings, one has to look from the bio-anthropological and psycho-socio-cultural windows. To do so, he recommends the reorganisation of cultural anthropology, social anthropology, history, psychology and social sciences. Morin thinks that it is necessary to convert one-dimensional structures into multi-dimensional structures by integrating areas that have been disconnected from each other (Morin, 2013).

Morin argues that there is diversity and unity in human nature (Dincer, 2006; Dogan, 2016; Erdem, 2012; Morin, 2001; 2012; 2013). This is a reflection of human's being a complex entity. People are living in an environment of ethnical and cultural diversity. In order to make sense of this diversity, either an unreal unity through stratification or a heterogeneity that makes it even more difficult to understand is brought about. According to Morin (2012), 'man is a highly complex creature'. Human is characterised by a principle of diversity and unity that support each other. According to Morin (2012), human nature is revealed in an uncertain and suspicious manner. Human complexity creates uncertainty in that human being cannot be restricted to a simple definition and a complex definition cannot be made for it because assuming that human can reveal itself through only emotions will remain inadequate to understand it. Like a microphysicist, using the contradictory concepts in the phenomena, he/she has observed as complementary concepts, in order to understand human beings, contradictory concepts should be used in harmony.

The complexity of human being causes it to possess opposite qualities (Morin, 2013). Human being has opposite characteristics. Human being is both reasonable and crazy, both hardworking and role player, both empirical and imaginative, both thrifty and extravagant, both narrative and poetic. This feature of man that can live the contradictions together makes its own specific fabric. Thus, 'the development of mental-empirical-technical knowledge in human existence has never invalidated symbolic, mythical, magical or poetic knowledge'.

In order to understand human nature, people with opposite characteristics should be evaluated together (Morin, 2013). Therefore, the wise man and the crazy man who seem to be opposite to each other must be connected. Productive human, constructive human, technician human, singing human, dancing human, unstable human, rational human, neurotic human, conscious human and unconscious human should all be seen as the reflection of the same nature. All of these are given to individuals in such a way as to increase diversity in humanity and then united back (Morin, 2012). However, it is not possible to understand this diversity with a single unifying principle. According to Morin (2001), the understanding of diversity is possible through unity in an extremely complex system.

# 3. Edgar Morin's philosophy of education

Morin begins philosophy of education by first studying information. According to him (2013), any information contains errors and illusions. Education needs to take these issues into account. Underestimating the problem of error and the problem of illusion will result in greater errors and illusions. Scientific knowledge is a powerful tool for finding errors and getting rid of illusions. But there is the danger that paradigms that influence science can develop illusions. There is also no scientific theory that is immune to error. Since scientific knowledge cannot solve problems on its own, education should devote itself to finding errors and illusions.

The errors that Morin thinks will lead to misinterpretation of knowledge are mental errors, intellectual errors, errors of reason and paradigmatic blindness. According to Morin, the human mind tends to select the memories that serve its purposes and to erase the ones that do not serve for its purposes. Unconsciously formed reflections and confusions distort memories from reality. Man can sometimes see the things that have not been really experienced as if they had occurred and

sometimes the memories that have been experienced as if they had not occurred. Therefore, human memory, which is the source of the truth, can be filled with errors and illusions (Erdem, 2012).

Intellectual errors, which are another cause of errors and illusions, stem from thinking systems. Thinking systems can protect them. In the regulatory logic of every thinking system, there is a resistance to the information that is not suitable for it or that cannot be acquired. Theories tend to oppose theories that are hostile to them. This makes it difficult to accept the correct information encountered. Teachings that withdraw into themselves somehow close themselves to real knowledge even if they protect themselves against criticism (Gundogmus, 2013).

Errors of the mind, which cause errors and illusions, are also seen as a breakdown of rationality and its turning into rationalisation. While rationality serves the function of protection against errors and illusions, it can cause errors and illusions when it turns to rationalisation. Morin sees rationality as open and rationalisation as closed. Although rationalisation is fed from the same sources as rationality, it is a source of errors and illusions. Because it views the world as causal and mechanical, rationalisation causes errors and illusions. In order to avoid this, the characteristics and lives of entities must be taken into consideration (Morin, 2013).

According to Morin, people react to unexpected situations because they feel safe in their own theories. People who are surprised by unexpected situations find it difficult to accept the new. But, new situations are constantly emerging. Therefore, new phenomena to be emerged should be considered as normal. But rather than forcing novelties into theories that will react them, theories and ideas should be reconsidered (Erdem, 2012). Morin (2013) argues that if the sources of errors and illusions within the information are not taken into consideration, these errors and illusions will constantly renew themselves. According to Morin, knowing how to incorporate new information into old information is an important principle and requirement for education.

Huge advances in the field of knowledge in the 20th century have been achieved through specialisation in disciplines (Morin, 2012). But, these advances in knowledge have led to a decline in knowledge through specialisation that breaks context, unity and complexities. Therefore, with the enormous advances in the field of knowledge, huge obstacles have accumulated. Thus, the implementation of reasonable information has been prevented. Formed by disciplines, minds lose the ability to place knowledge in their context and to understand it in its unity. Failure to perceive the unity and everyone's being engrossed in their own field of specialisation lead to weakening of responsibility and solidarity.

Morin (2013) sees over-specialisation as a major problem in terms of education. Over-specialisation prevents generalisation as it disintegrates into parts and seeing the essence as it eliminates. Therefore, it considers specialisation as a special form of abstraction of information because specialisation breaks the relationship between the part and the whole by removing the object from its context. Therefore, according to Morin, mathematically advanced sciences are humanly lagging behind as they isolate themselves from historical, political, psychological, ecological and social conditions. Specialisation is simplification. The principle of simplification simplifies the complex one. Therefore, it can blind people and lead to the elimination of everything that cannot be measured. Thus, humane concepts, such as passion, enthusiasm, pain and happiness, can be eliminated. Morin argues that the education creates an incomprehensible puzzle because it teaches to separate information rather than interconnect. For this reason, he says that mechanistic, reductive intelligence, which disintegrates into pieces, is often a myopic because it converts multidimensionality into unidimensionality (Morin 2013).

Edgar Morin regards education's function of teaching what is being a human as a priority because people should not forget the quality of being a person while recognising their individuality and culture. The recognition of human being should also be in its context, not apart from the universe. Therefore, it is not possible to separate the question 'Who are we?' 'Where are we from?', 'Where do we come from?' and 'Where do we go?'. According to Morin, the fragmentation of humanities has made human

complexity invisible. For this reason, it is important to position the education in a way to understand human complexity (Morin, 2013).

In order to get to know man who is the subject of education, it should be considered that it has unity within variety and variety within unity. Therefore, the idea of the unity of the species should not eliminate the idea of the diversity of the species and the idea of the diversity of the species should not eliminate the idea of the unity of the species by means of education. Man is an entity with unity and diversity. There is biological, cultural and social diversity within human unity. According to Morin, education should be able to reveal the unity and diversity of man in all the areas.

According to Morin's conception of education, studying and investigating the complexity of human is one of the main directions of education. Through education, the multi-faceted destiny of human beings should be shown and explained with examples. The multi-faceted destiny of human beings includes all the destinies, such as the destiny of the human species, individual destiny, social destiny and historical destiny that are intertwined and inseparable to each other. This orientation of education should lead to the learning and awareness of the common state of people and very rich diversity of individuals, cultures and peoples.

According to Morin, one of the goals of education is 'understanding'. According to him, there is a problem of understanding today. He describes the problem of understanding as planet-wide and individual. He states that there is a problem of understanding between different cultures and peoples which are distant from each other, and that there is a problem of understanding in the relationships between peoples close to each other. Although communication is highly developed today, lack of understanding is still widespread. Morin, who argues that no communication technique, whether it is the telephone or the internet, brings understanding and thinks that despite the developments in understanding, lack of understanding has progressed further. Therefore, he argues that education should focus on understanding of human rather than maths or any discipline. According to him, the problem of understanding will have an important role in forming the future education. He argues that the 'mentality reform', which will comprehend the importance of understanding for humanity, since it is not possible for people to come together without understanding, will be realised through an 'education reform' (Erdem, 2012). According to Morin (2013), egocentrism leads to self-deception. One's not understanding himself/herself is an important cause of his/her not understanding others. Similarly, ethnocentrism and social centrism constitute an obstacle against understanding different peoples and cultures. In addition, the reducing mind simplifies everything, making it difficult to understand the complex. Morin argues that understanding is both the means and end of communication. According to Morin, mutual understanding is needed for the development of interpersonal, international and intercultural relations. The function of education in the issue of understanding is to realise the mentality reform in order to make people recognise the vital importance of understanding. According to Morin's conception of education, universities have a very important place. The university protects and integrates the cultural heritage made up of knowledge, ideas and values. It continuously revises updates and transfers the cultural heritage. The university not only inherits knowledge, ideas and values but also creates new knowledge, ideas and values by processing them. Universities have inherent characteristics of protection, revitalisation and regeneration. It is not possible to prepare the future without preserving the past. For this reason, the protection function of universities is of vital importance. The university has a mission independent of what is happening outside. The mission of the university is to instil a culture that will not undergo changes in society in the future and to defend the values that claim what is true and beneficial is superior. Therefore, the university has a mission of inculcating a culture on the basis of universal values that is independent of time and nations (Morin & Ceruti, 2014).

# 4. Personality characteristics that should be imparted to the individual through education according to Edgar Morin

Edgar Morin advocates that individuals should be raised with universal values. The proposals he made over Europe clarify the issue of which characteristics should be gained by the individual. Morin and Ceruti (2014) state that individuals should have characteristics for unification rather than separation. For this reason, he sees the possibility of nationalism's reaching destructive dimensions as a serious threat. He wants the nationalist ambitions of Europe to be removed from individuals, which caused the destruction that Europe suffered in the past.

According to Morin, people should have a sense of citizenship, but this should be inclusive, not exclusive. Thus, different nations will be able to benefit from each other's cultural background because destructive nationalism based on violence leads to interpretation of the traditions of nations in a narrow framework (Morin & Nair, 2000). Therefore, the resurgence of nationalisms is seen as a harmful situation. Morin and Ceruti (2014) recommend that European nations make an effort to understand each other better. He advocates the training of a new national citizen through the education. They argue that nations should develop their identity and historical wealth, and that the domination of the future world will not be on the basis of the nation. That is why it is necessary for Europe to have a training mission to train citizens to evaluate this situation.

According to Morin, an individual should be encouraged to use his / her intelligence in full capacity with education. In this way, education should develop the ability of the mind to identify and solve the real problems. In order to achieve this, it is necessary to revive curiosity which is the most vivid talent of the people and then let it work freely. However, in education systems, curiosity is suppressed whereas it should be promoted (Morin, 2013).

Morin (2001) thinks that individuals need to acquire new insights and new skills in the new millennium. People should be able to think about both their own problems and the problems of their own time. For this, both the state of humanity in the world and the state of the human world, which has been transformed into a planet age throughout history, must be understood. According to Morin (2013), humanity has entered the planet age since the 16th century, and at the end of the 20th century, it has moved to the globalisation stage. But the more information is learned about the world, the more difficult it is to understand the world. While drowning in the complexity of the world in the age of information and internet, numerous information about the world make it difficult for man to comprehend the world. What makes it difficult to recognise the world is the way of thinking that limits it to a certain context and blinding its ability to globalise rather than promoting it. At this point, Morin deems it necessary to consider the part-whole relationship, the multidimensionality, the complexity and the globality of this age as a requirement of the planet age. According to Morin, the world needs a multi-centred thinking that aims at a conscious universality while considering the unity and diversity of humanity because a multi-centred thought is needed for the nutrition of world cultures. Therefore, the goal of education is to work to create the global identity and consciousness in individuals of the planet age (Morin, 2013).

Morin (2001) states that the planet is shrinking while rapid globalisation is being experienced and that people become interdependent in this globalising world. He argues that globalisation produces a unity and that this unity requires a sense of belonging that connects the individual to the earth, which he/she sees as the ultimate homeland. Thus, Morin (2013) emphasises that the concept of *Earth-Homeland* can be put forward because it involves common identity and fate partnership. He also points out that people have a common cerebral, emotional and genetic identity with social and cultural diversity. On the other hand, he stresses that the planet has been interconnected in a common destiny as humanity has been struggling with the same problems since the 20th century. In today's globalising world, people need to have a common consciousness. Now, as the members of the planet earth of mankind, people must learn to establish a partnership in thoughts and emotions,

survive, share and communicate. Human beings should be not only a cultural entity, but also an earth entity.

To do so, according to Morin (2013), individuals need to gain;

- Anthropological consciousness that recognises the unity and diversity of humanity.
- Ecological consciousness which refers to the consciousness of living in the same planet together with all mortal beings.
- Earth citizenship consciousness which refers to the consciousness of solidarity and responsibility for the children of the earth.
- Dialogical consciousness that enables people to criticise each other, make self-criticism and understand each other.

As can be seen here, Morin (2001) believes in the necessity for people to gain a world identity through education. He suggests that people should be united rather than disintegrated. He sees it necessary for different homelands to be connected to each other within the universe of the earth-homeland rather than being against each other. He emphasises taking the nurturing side of the past not the uncompromising side of the past in globalisation to prepare the common future. According to Morin and Nair (2000), the nation-states equipped with absolute power and authority have completed their productive life. Nowadays, what is needed is not to disintegrate states rather make them participate in the unity and respectful to it and train individuals accordingly.

Morin (2013), who advocates teaching the citizenship of the world to individuals, states that there is a need to establish a new democracy on a global scale because Morin (2001) thinks that democracy does not function perfectly today. Democracy cannot be achieved everywhere and has its own deficiencies in itself. There are also totalitarian regimes far from democracy in the world. Therefore, he states that something can be done only with a thought reform to be built on the accomplishment of real humanism and individuals' gaining World-Homeland consciousness. According to Morin (2013), together with citizenship identity, responsibility and solidarity should be renewed and revived. As a result, he argues that democracy will also be renewed and revived.

Morin (2001) notes that an education reform in elementary, middle, high and university education should be accomplished for the thought reform he advocates to be achieved. This thought reform should be able to 'democratise the right to think'. Furthermore, thought reform requires a paradigmatic revolution that will bring about complex thinking that will allow the information disintegrated by disciplines to be re-linked and reorganised. Morin thinks that thought responsibilities are more overwhelming today than ever in human history. Therefore, he sees thought reform as a key to solving anthropological and historical problems.

# 5. Edgar Morin's suggestions for the education system of future

According to Morin (2013), 'knowing' has an important place in the crises that humanity has faced throughout history. Therefore, there is an urgent need for a thought and education reform. Besides the ignorance of people, what they know constitutes an obstacle to understanding the crises. Morin argues that while specialisation in different disciplines gives humanity a wide range of information, at the same time the link between this information cannot be established. According to Morin, existing education systems teach disintegrating disciplines rather than unifying them. In fact, even the information that needs to be connected to each other is separated because the information that is not connected to each other remains insufficient to understand the complex. He thinks that it is difficult to understand multidimensional problems because current education approaches simplify the information by breaking it down into small pieces. According to Morin and Ceruti (2014), human mind should also be taken as a whole as is the case with man. Human's having fragmented minds will cause them to have no knowledge about some issues at all. With current approaches in education, most things are handled in the context of causality. However, this approach, which works on artificial

machines, does not work when it comes to human beings. Intelligence that separates knowledge will divide the complex world into disjointed elements. With the education approach, which is used to simplify everything, problems are also tried to be solved by disintegrating them. However, the reduction of multidimensional problems to a single dimension makes it impossible to bring permanent solutions to the problems.

It is noteworthy that Morin has shaped his proposals for the future education system according to the needs of Europe. Morin and Ceruti (2014) believe that social development and education will mutually feed each other. For this reason, Europe should establish its social integrity with a new social contract. He states that European politics can be a solution to the inadequacy of education along with social problems only if it is structured on common foundations. Stressing that Europe has established its own identity with the principle of 'unity in diversity and diversity in unity', he complains that this has been forgotten today. The establishment of the university is also based on the principle of 'unity in diversity and diversity is centific, economic and social development has been due to the university. Europe has been developing through universities. Europe has appreciated the differences and this appreciation has also been reflected in its education system. As a result of the respect shown to each other by different cultures, consciousness of common life has been developed. Europe has aimed to transfer its gains through its compulsory school systems. But national selfishness impedes Europe's co-existence by drawing on its diversities. The danger of group interests prevailing over common interests poses a threat to the universities of Europe today (Morin & Nair, 2000).

According to Morin (2013), school and university are succumbed to the closed understanding of specialisation created by disciplines separated from each other. Therefore, they have become experts in solving small problems but unable to solve vital problems. Therefore, the future of the education system has to be shaped on a basis that diversity will not cause segregation.

Morin sees the restructuring of the university as a necessity for future education. According to Morin and Ceruti (2014), the paradigm shift necessitates a university reform. The main goal of such a university reform is to make the full use of intelligence. Morin argues that separating thought should be replaced by binding thought. With the university reform he sees as a must, comprehensive thought and contextual thought should be produced. The idea of context here aims to establish the relationship between a phenomenon and context. Thus, it will be possible to consider the whole when handling parts rather than handling everything piece by piece.

Morin (2012) regards education and thought reform as a historical and anthropological problem which is very important for our age. According to Morin, university reforms so far have neglected the form of intelligence. The complexity of the problems surrounding the world makes one feels helpless. Therefore, it is necessary to make people think about complexity. He attached great importance to complex thinking and thought that erroneous thinking was very effective in the problems that humanity was exposed to. Humanity has become unable to see the problems due to one-dimensionality. There is unconsciousness because human intelligence is blinded. Not seeing multi-dimensionality and complexity causes humanity to face many problems. Morin tried to establish a link between his complex thinking and the different dimensions of reality. He argues that truth is not the same everywhere. In order to make sense of information, it is necessary to consider its context (Maximulation, 2017). Complex thought accepts that the knowledge of the parts that make up the whole depends on the knowledge of the whole and that whole information is related to the knowledge of the parts. According to this, the world is seen as a whole connected to each other, not as the addition of separated parts to each other. Therefore, complexity is a dimension of thinking and it is against breaking down the whole (Cruz et al., 2017).

In complex thinking, not every decision includes the same results. Future includes uncertainties. Therefore, it will be easier for people who accept this to cope with the uncertainties of the future. Morin, who refuses to simplify everything in the world and to think unidimensionally, emphasises multidimensionality when evaluating everything and defends not what has been determined in advance but the one that is suitable for the current state in evaluating events. Morin emphasises that

not being understood and misunderstanding is a great danger for humanity and that better understanding can be accomplished with complex thinking. He states that complex thinking is an important necessity for humanity. Therefore, he sees it necessary for man to learn methods to develop his mind in order to comprehend the relations between the piece and the whole in a complex world (Maximulation, 2017).

According to Morin (2013), man and society are complex units and multi-dimensional because man is emotional, spiritual, biologic and social. Society includes sociological, religious, historical and economic dimensions. Therefore, for knowledge to be reasonable, this multidimensionality must be recognised. In addition, reasonable knowledge should be able to deal with complexity. Morin states that there is complexity when the elements that make up the whole are interdependent so that they cannot be separated. Therefore, he sees complexity as the link between unity and multitude. In order for information to be rationalised, according to Morin (2013), education should develop a general intelligence that is prone to linking and referring to the whole with a multidimensional approach. The task of education to develop general intelligence should be in the scope of both using existing knowledge and overcoming their dispersal. Within the context of the education of future, Moring finds it important to teach the identity of world citizenship considering the globalisation of the world. With this, he emphasises the civilisation of the world and the solidarity of people (Morin, 2013). He states that even the things that people use in their daily life come from different parts of the world and that globalisation makes the world smaller; thus, we do not much feel the existence of borders. People living in different parts of the world need each other under the influence of globalisation. On the other hand, he also criticises the globalisation as while comfortable lives are lived in some parts of the world, some places in the same world are exploited. For this reason, according to Morin, education should teach the people of the earth to share, to communicate and to exist with the partnership of emotion and thought (Erdem, 2012).

While Edgar Morin makes suggestions for future education, he says that future contains uncertainties. Therefore, he thinks that it is important that education is designed to meet the uncertainties of unpredictable future. Morin uses past examples to illustrate the uncertainty of future. Before living the events, it is not possible to predict their outcomes. Thus, Morin thinks that training people who are prepared for unexpected situations should be one of the tasks of education (Gundogmuş, 2013). According to Morin (2013), the ethics of human species should be developed by accepting the inseparability of the relationship between individual, species and society. Stating that humanity is moving away from its nature, he sees it necessary for people to work to humanise through the development of the ethics of solidarity and understanding. He emphasises that this understanding of ethics, which he calls anthropo-ethics, can bring about responsibility and solidarity by reviving citizenship and democracy. While expressing that this ethics can only be gained through individual consciousness, he draws attention to the importance of education for the individual.

# 6. Discussion, Result and Suggestions

Morin is one of the most important and symbolic thinkers of the 20th and 21st centuries. Edgar Morin must be referred to while talking about education, thinking and changing of paradigms. He is regarded as the most prominent figure of complex thinking (Cisolog, 2013).

Morin states that through education, it is necessary to civilise the world and to establish solidarity in the world. He also claims that with an education that will ensure not only the development but also the survival of humanity, the human species can manage to create real humanity. According to Morin (2013), the consciousness of humanity in the planetary age should lead everyone to be in solidarity and compassion with others. Morin thinks that education should include the ethics of understanding the planet. While criticising the traditional understanding of education, he recommends a world-wide education reform, including thought reform.

Morin argues that education is both a tool to solve many problems and can be a source of problems. He therefore advocates a reform of education. While it is aimed to teach information through education, the fact that this information contains error and illusion will produce problems instead of generating solutions. For this reason, Morin deems it necessary to question the understanding of education and to have an understanding open to innovations. He thinks that the misconstrued information will cause blindness, and thus it will be impossible to see the truth. He is of the opinion that rather than adding each newly learned information to the prior information, when necessary, prior information should be questioned and changed.

While Morin advocates the development of a human policy that deals with the problems of humanity as a whole, it is the task of education to provide what is needed to achieve this. According to Morin, in a globalised world, individuals are needed to ensure the civilisation of the world. People who grow up with universal values must have the consciousness of world citizenship. This consciousness of citizenship should be very distant from the conception of destructive nationalism and should not be exclusive. People who gain a common consciousness through education should be taught to benefit from the cultural accumulation of different nations. Individuals should adopt the nurturing side of a common future, not the uncompromising side of the past. Morin emphasises the need to teach the individual to use his / her intelligence at full capacity through education and states that there is a need for thinking and sensitive individuals for future. Therefore, he argued that thought reform must be realised in order to educate individuals with democratic thinking.

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