A Brand New Approach To Sets in Mathematics Education*

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ABSTRACT:

In this study, first of all, a definition of sets will be explained. In addition to the definition of the set known in mathematics, new approaches will be presented. Ten rules about the set definition model will be proposed. 1- It is necessary to determine the title and descriptive identity of the set. 2- It is necessary to determine the address of the set. 3- Specifying the appropriate boundary of the set of creature.   4- Specifying the time of the cluster. 5 - The status of the cluster action must be specified. 6- The type and group of the cluster should be specified. 7- The status of live or non-live clusters should be indicated. 8-The load of the cluster element must be specified. 9- If possible, the gender of the cluster element must be specified. 10- The scientific name of the cluster elements must be specified. Out of these ten rules: the cluster must be specified if there is a special case. Later, the definitions of these rules will be presented with examples. Also gender, load, location, action, group, live and inanimate ... etc. cluster properties will be defined. Examples of animate and inanimate creature sets will be presented.

After all, we gain mathematical cluster consciousness of all animate and inanimate creatures and systems in the nature. In addition to this; Natural, artificial, virtual, objective, mental, light ... etc. examples of sets will be given.

Key Words: A Brand New Approach To Sets, Set Definition Rules, Mathematical Education

Introduction: Mathematics is like a habitat in which all the branches of science

flourish. Mathematical Science: Creates the denominator of the Science Cluster. Other branches of science form the shares of the Science Cluster. The Sum of shares and denominator: represents The Cluster of Science. Mathematical knowledge is like the heart of science. Science without mathematics can not work.

In mathematics; the collection of well-defined creatures is called a cluster. These creatures can be objective, virtual, imaginary ... etc.

The peculiar set is defined as the set in ontologically determined field which has been superficially or naturally defined in this field; it also symbolizes the peculiar population; everything in the universe, every entity in the universe even the anthropomorphically fabricated gods are considered to be within that defined set and population except for Allah CC'HU the only god who can never be categorized or included in any geometrically observable universe, space or time . Everything except for Allah CC'HU and his attributes are bound to be defined, categorized by time and space and be determined within a set, group or population. Allah CC'HU can never be determined anthropometrically in a materialized conceptualization, because Allah CC'HU is independent from time, creatures and space; we can talk of creatures things which are concrete, which are abstract, virtual, semi-virtual through human anthropomorphisms.

In this presentation, the population and peculiar set conceptions have been matched, compared; For this reason, the particular population and peculiar sets together their elements can be scrutinized based on a single set of logic, Based on this analogy, the animated beings and entities can also be categorized within each and every population, and they can become ineligible, tangible in all the animated and inanimated objects and entities.

According to the Descriptive Design Model of Set, the 10 Determinative Rules of the Set.

I. It is necessary to determine the title and descriptive identity of the set. Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual,

mental ... etc the set group, authenticity, descriptive title... etc should be given correctly.

For example, a cluster of living species, concepts, actions, letters, symbols, markings, visuals, tastes, touches, smells, peculiar subatomic particles, peculiar atoms, shapes, dreams, original molecules, original elements. In addition, such as a cluster of cosmic dust nebulae, cluster of stars, cluster of planets, cluster of fossil light, cluster of natural light, cluster of current light, the cluster of artificial light.

II. It is necessary to determine the address of the set. Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual, mental… etc the correct address of the creature clusters must be scientifically and clearly defined or known. For example, GPRS coordinates, local and scientific addresses must be given.

III. Specifying the appropriate boundary of the set of creature. Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual, mental… etc boundary of the creature sets must be scientifically and clearly defined or known. if required, the set boundary can be determined artificially, naturally, scientifically, politically ... etc. For example, the boundary of set of species is matched to the distribution of the population.

IV. Specifying the time of the cluster; Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual, mental… etc. The date and time belonging to the creature sets must be determined scientifically and clearly. For example, past, present, future and all-time date should be clearly indicated.

V. The status of the cluster action must be specified. Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual, mental… etc the active (dynamic) and inactive (static) state of the set belonging to creation must

be determined scientifically and clearly. For example, the population of flying birds is a dynamic set.

VI. The type and group of the cluster should be specified. For example, Natural, Artificial, Semi-Natural, Virtual, Fictional, Theoretical, Intellectual, Mental ... etc. Must be specified as a cluster.

VII. The status of live or non-live clusters should be indicated. Natural, artificial, semi-natural, virtual, fictional, theoretical, intellectual, mental… etc the creature belongs to the set; live, lifeless, semi alive situations should be determined. For example, virus population, plant seed and plant spores are semi-living creatures.

VIII. The load of the cluster element must be specified. If possible, positive, negative and neutral creature set member load, must be specified The upper left side of X symbols of the set element (X); + (positive), - (negative), 0 (neutral), +, - (positively and negatively charged), * (uncertain creatures) the loads are written with original symbols.

For example; ^{+}X (positively charged creature), ^{-}X (negatively charged creature), $^{+\ -}X$ (positively and negatively charged creature), ^{0}X (neutral charged creature) . These symbols can be used.

For example, the loads of chemical elements and subatomic particles adhere to this rule.

IX. If possible, the gender of the set element must be specified. The upper right side of X symbols of the set element (X); + (positive), - (negative), 0 (neutral), +, - (doubly loaded), * (uncertain creatures) the loads are written with original symbols.

X^{+} (male creature), X^{-} (female creature), X^{+-} (double sex or dwarf creature), X^{0} (neutral sexual creature), X^{*} (vague sex live), X^{**} (other unknown sex creatures)

A set containing triangle varieties is a sexless set example.

X. The scientific name of the cluster elements must be specified. If possible, scientific and local names of the set member must be specified. For example, Pinus sylvestris L. (scientific name), scots pine (local name).

Apart From These 10 Set Rules, The Special Case Of The Cluster Must Be Specified If Necessary. Formal, quantitative, qualitative, semantic and relational similarities of cluster elements are very important. For example, human sets in Japan, Iran, Anatolia, Africa, etc. are similar in shape, but the sets differ in meaning, relational and cultural. In this respect, looking at all the live sets in general, set elements and sets that grow in similar conditions are very similar, while those that grow in different conditions have less similarity.

The Application of the Set Design Model:

Every creature is in at least one set. The creatures are found inside or inside the intersecting sets. Take advantage of this feature: we can choose the set of creatures that are appropriate for our purpose. For example, the Earth planet: the set element of both the solar system and the galaxy of hay. For example, we can accept a letter as a set element. This letter can be both a sentence set member that belongs to it and a set member of a book. In fact, a symbol can be considered a cluster element for all of its usage areas in the world. We can think of it as a metal and a nonmetal element.

Based on this analogy, for each creature, we can choose the appropriate set for the purpose.

In this model, no cluster member is 100% identical to the other. So X is similar to X. In any case, one does not replace the other. Because every creature is unique to itself. Even every symbol or letter is unique to itself.

As a result, each creation can be viewed as one or more cluster members. The largest cluster is the energy cluster. All creatures are sub-members of the energy cluster.

Some Cluster Courses Prepared According to 10 Rules of Descriptive Cluster Design Model.

1- The atomic quantity in the Universe is constant. Elements, stars, planets, galaxies ... etc. all creatures are made from atoms. In this presentation, the formation of upper clusters such as planets, stars and galaxies from atoms is explained.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinatomhamurukume/dilvinatomhamurukume.htm

2- In this presentation, the specificities of the clusters formed by atoms and subatomic particles of the elements are described. In this lesson, the formation of atoms from subatomic particles and the formation of elements from atoms is explained. This is the case for natural atomic cluster formation. At the same time, from the elements: the formation of more complex creatures is explained.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinatomkume/dilvinatomkume.htm

3- In this presentation, the features of the cluster of the Orion Nebula that are closest to Earth are described.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinoryonbulutsusuk/dilvinoryonbulutsusuk.htm

4- In this presentation, the features of the Helix (Eye of God) Nebulae cluster are described.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinbulutsularhelixbk/dilvinbulutsularhelixbk.htm

5-In this presentation, the Inner Life Cycle of the Crab Nebula Cluster in our Galaxy is described.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinyengecbulutsusuk/dilvinyengecbulutsusuk.htm

6- In this presentation, the features of the Cluster of the Nebulae and the Cluster of the Eagle Nebula are described.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinkartalbulususuk/dilvinkartalbulususuk.htm

7- This presentation describes the characteristics of the fossil light clusters from the Space and the light-colored palette clusters of Habıl Teleskob.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinfosilisikk/dilvinfosilisikk.htm

8- In this presentation, the relation and origins of clusters of the galaxies, black holes, white holes (quasars) and radio lobes in the Universe are explained.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvingalaksikarakdeliklerk/dilvingalaksikarakdeliklerk.htm

9- In this presentation, before and after the galaxy in the Universe, Laymin Alfa gas cluster formation is being analyzed.

http://www.biyolojiegitim.yyu.edu.tr//kf/dilvingalaksiolusumuk/dilvingalaksiolusumuk.htm

10- In this presentation, the formation of the Universe is described from galaxy clusters formed by all star and planetary systems.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvingalaksikume/dilvingalaksikume.htm

11- In this presentation, 5 billion years later, the sun rising from the west and the sunset from east are told. In addition, it is told that the world will be lived the doomsday with burning light clusters.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvingunesisikk/dilvingunesisikk.htm

12- In this presentation, the Relationship and Origin of the Cosmic Network Cluster, Galaxy Clusters, Galaxies Top Clusters, Huge Space Clusters are discussed.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinkozmikaggalasiustk/dilvinkozmikaggalasiustk.htm

13- In this presentation, the specificities of the plant and building clusters YYU at Zeve Campus are explained.

http://www.biyolojiegitim.yyu.edu.tr/kf/zevey/dilvinkume.htm

14- Equus Burchellii and Grevyi (South African Zebras) cluster around the Okavanga River in the Kalahari Desert of South Africa.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinzebrak/dilvinzebrak.htm

15- A cluster of Fringilla coelebs (South African finch bird) in the vicinity of Lake "Makadigadi" in the Kalahari Desert, South Africa.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinispinozk/dilvinispinozk.htm

16- South African Kalahari Desert, Phoenicopterus roseus (South African Flamingo Bird) cluster on Lake Makadigadi.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinfilamingok/dilvinfilamingok.htm

17- The Clusters of Virtual Geometric Shapes, Orbits, Futurist (Futuristic) Shapes and the Clusters of Animation of Robots.

http://www.biyolojiegitim.yyu.edu.tr/kf/dilvinsanalkume/dilvinsanalkume.htm

18- Examples for Yellow, Red, Green and Orange Color Cluster Elements.

http://www.biyolojiegitim.yyu.edu.tr/kf/mahmutrenkler/mahmutrenkler.htm

19- Examples of Natural and Artificial Light Sets.

http://www.biyolojiegitim.yyu.edu.tr/kf/mahmutisik/mahmutisik.htm

The Classification of Creature Clusters.

-Clusters of creatures can be classified according to various purposes. For example; Natural cluster, artificial cluster, semi-artificial cluster.

-Object, Light, Heat, Thermal and Radiation Energy Clusters of All Creatures.

- A cluster of all living things. It contains all living things

- Semi-vibrant cluster. For example, it includes Seed, Sports, and Virus clusters.

-The Cluster of lifeless creatures. For example, clusters of dark matter, dark energy, stars, planets, galaxies, nebulae, elements, compounds, mixtures, atoms and subatomic particles.

-The Cluster of Magnetic Gravitation. For example, Clusters of special and general magnetic gravitation areas.

- A cluster without any creatures is called an empty cluster. However, in Real Life, each empty cluster is a creature and is in an upper cluster or clusters. It is a sub-element of the upper clusters. All empty clusters carry energy. A place without energy is unthinkable.

Applications of the Concept of Set.

The application of the cluster concept to life seems insufficient. The natural equivalents of the cluster and cluster elements must be correctly matched. For example, in the branch of biology: the definition of the concept of population in the living things overlaps with the concept of the set in mathematics. Population members overlap with cluster elements. Based on this analogy, the concept of space limitations of inanimate creatures in nature overlaps with the boundary of the cluster.

For example, in Chemistry, each element can be viewed as a cluster member in Nature or in the Periodic Table. According to recent scientific research: 74% of the universe is the cluster of hydrogen element, 24% is the cluster of helium element, and 2% is the set of all remaining elements.With this logic, atoms and subatomic particles can be thought of as clusters elements of molecules, compounds and elements.

http://www.biyolojiegitim.yyu.edu.tr/fizuzaypdf/Elemen200815S.pdf

The cosmic alphabet of all the clusters of objective creatures is the elements. The dough of this alphabet forms atoms and subatomic particles. For example, in the Universe: a cluster of all protons, a cluster of all neutrons, a cluster of all stars, a cluster of all planets, a cluster of all nebulae, a cluster of all galaxies, a cluster of all water in the Universe; The entire set of light in the universe, the set of all gases, the set of all living things in the universe, the set

of information in all libraries, the set of all objective-virtual-intellectual information in nature, the set of all letters, the set of virtual information in all computers. For example, in the Universe: a cluster of all protons, a cluster of all neutrons, a cluster of all stars, a cluster of all planets, a cluster of all nebulae, a cluster of all galaxies, a cluster of all water in the Universe; The entire set of light in the universe, the set of all gases, the set of all living things in the universe, the set of information in all libraries, the set of all objective-virtual-intellectual information in nature, the set of all letters, the set of virtual information in all computers. While the concept of the cluster is applied to life: we base our selection on the object, virtual or intellectual cluster element. We choose either the parent set or the upper parent sets to which the set element belongs based on our goal. For example, we accept a scots pine tree (Pinus sylvestris L.) as the cluster element. It may be all pine tree (Pinus sylvestris L.) populations or cluster members in the world. At the same time, there may also be a scots pine population (Pinus sylvestris L.) or cluster member in Turkey. For example, the cluster member is the world planet. We can accept the upper cluster boundary as the solar system or the universe. Or we can accept an element of the planets in the whole universe. For example, a cluster of Milky Way Galaxy planets, a cluster of all planets in the universe, a cluster of planets in the solar system.

Observations and Judgments:

1- The definitions of alphabets, numbers, symbols and concepts in existing mathematics; missing, inaccurate, inadequate ... etc parts must be discovered, developed and completed.

2- The scientific principles, rules and disciplines of the evolutionary position and phylogenetic development of all the clusters in the Universe belonging to subatomic particles, large creatures above atoms must be well defined and developed.

3- In the nature: New inventions and new discoveries have to be made about Gold rules, Binomial expansion and Fractal rules. With this natural logic

matches the existing mathematics to natural mathematics. In this area, the scientific rules of the current mathematics clusters and natural mathematics clusters are not exactly matched.

4- Matching the teeth of the zipper between the existing mathematical set rules and the natural mathematical set rules is an important issue. For this purpose, misconceptions and missing definitions in mathematics should be re-examined. For example, the definitions and relations of the concepts of Zero, Infinite, Eternal and Cluster must be re-examined. It is for this reason that the relation and the importance of mathematics in science and other branches of science have not yet been sufficiently determined.

5- Perhaps, except for the exception "(Allah CC'HU)": everything is at least in a cluster. If this idea is true, all living and inanimate creatures are in a single cluster. This is the set of everything. There are infinite numbers of subsets in it. Accordingly, every infinite is in at least one cluster**.**

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