

Understanding Mental Sicknesses Through A Concept Map

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Abstract- This article aims to visually describe the important concepts of mental sicknesses and mental hygiene and the relationships thereof using a Concept Map. Such knowledge representation technique eases the tasks of managing large representations for complex domains and sharing knowledge with peers and colleagues and publishing them. Mental Hygiene is a very important domain to prevent our mental sicknesses in this modern ultra busy life. The concept map here would be of immense help for faster, easier and effective understanding of the complex Mental Hygiene domain without reading large texts lines after lines and pages after pages. Professional hazards and stringent product or service delivery schedules make our lives full of stresses resulting in mental defects followed by irreparable damages in our bodies. Readers would clearly understand the ways to avoid mental illnesses and to prevent allied diseases on going through the concept map on mental sicknesses and mental hygiene. IHMC's information technology enabled C Map tool has been used here to develop the concept map. Everybody including scientists, engineers, information technologists and other professionals must be aware of this knowledge domain in order to keep their feelings, thoughts and reasoning defect less and to have robust mind. This work is a significant step forward toward development of Concept-Map based Public Health Informatics.

Keywords-Cognitive Engineering, Concept Map, E-Learning, Mental Health

I. INTRODUCTION

Most of us often neglect our mental health issues. This article aims to help us quick understanding of the complex but important mental health issues. Mental hygiene is the science of keeping the mind, brain and nerves of humans healthy. This is concerned with the prevention of mental sicknesses and maintenance of health and psychological issues like perception, cognition etc. Medicine helps biology whereas mental hygiene movement might help us to take care of human psychology. Mental Hygiene is a very important domain to prevent our mental sicknesses in this modern busy life to overcome stress, profound boredom, mental fatigues etc. Cognition is the psychological result of perception, learning and reasoning. Perception refers to the state of becoming aware of something via the senses. CMap improves visual perception. Psychology focuses on the acts and functions of our mind. Human brain is the most complex device on the planet comprising of 100 billion neurons interconnected by 1.5 million kilometers of nerve fibers. Brain enables us

The concept map here would be of immense help for faster and easier and effective understanding of the complex Mental health domain without reading large texts lines after lines and pages after pages. Professional hazards and stringent product or service delivery schedules make our lives full of stresses resulting in mental defects followed by irreparable damages in our bodies. Readers would clearly understand the ways to avoid mental defects and to prevent allied diseases on going through the concept maps on mind hygiene. IHMC's (Institute of Human and Machine Cognition, Florida University) information technology enabled C Map tool has been used here to develop the concept map. Everybody including engineers, scientists, students, information technologists, industrialists and other professionals must understand this knowledge domain in order to keep their thoughts, feelings and reasoning defect less and to have stress tolerant, robust mind and thus to have defect free thought process toward boosting higher productivity and healthy society. This work aims to discuss IT-enabled knowledge modeling - CMap perspectives over a given domain knowledge of mental health toward healthier mind and cognition. Moreover healthy mind would help us to extend our thought process toward better understanding the complex real life problems and to develop better computing model thereof through improved reasoning and analysis. Concept Map is a graph. This is comprised of concepts on the nodes and the relationships among the concepts on the arcs. Knowledge refers to information combined with experience, context, interpretation, and reflection. Knowledge representation techniques ease the tasks of managing large representations for complex domains and sharing knowledge with peers and colleagues and publishing them. Knowledge modeling is an interdisciplinary approach to capture and model knowledge. Knowledge is comprised of individual pieces of information called facts. Knowledge modeling is to package combinations of data or information into reusable format for preserving, improving, sharing, aggregating and processing knowledge to simulate intelligence. Such knowledge modeling approach is useful for teaching, learning, brainstorming and collaborative development of complex software products and knowledge acquisition and knowledge sharing during expert system development. This knowledge modeling work in this article aims to encourage the IT professionals to use C Map in their various knowledge management (KM) related tasks including e-Health, e-Governance, e-Learning, education technology, web and multimedia content development etc. for better effectiveness and this is a significant step forward to concept map enabled web-based KM applications development.

II. CONCEPT MAP

Elements of knowledge include *concepts* and *relationships* between concepts (or propositions). *Concepts* are the generalization of knowledge of ideas conveyed in some forms for example, books, documents, speeches or lectures. Concept is nothing but a perceived regularity in events or objects. Propositions state how concepts are linked together. A *Concept Map* comprises of concepts and propositions. Concept Maps are the graphical representations of knowledge that are comprised of concepts and the relationships among them. Concept maps are 2-dimensional representations of cognitive structures showing the hierarchies and interconnections of concepts involved in a discipline or a sub-discipline. This is an important tool for developing our both sensing and intuitive skills. Sensing skill is important to focus on already known and new information, whereas intuition skill helps us to construct relationships. It is to organize the information by groups. In a concept map, the nodes (in circles or rectangles) have been used to enclose the key concepts and these nodes have been linked with lines (normally directed downward) and words (e.g., verbs, preposition etc..) that describe the connection (or propositions). Another knowledge representation technique namely, mind map is somewhat similar to concept map but it has no linking words or propositions like a concept map has. Professor Joseph Novak developed concept maps that represent organized knowledge. A domain expert has hierarchically structured knowledge. Organized knowledge is comprised of concepts and propositions that are hierarchically structured in cognitive structure to aid creativity that begins with infants. Creativity is must to see interrelationships between various map segments. We need context dependent organized knowledge for effective teaching and effective learning and for answering focus questions. Creativity only can produce a very high level of meaningful statement. Concept is the highest level of "abstraction" for the map but it is the lower level of abstraction in the ontology. Concept Map (CMap) has been demonstrated to be an effective means of representing and communicating knowledge. Concept map facilitates meaningful learning, knowledge acquisition tool during expert system construction as a means of capturing and sharing experts' knowledge

III. CHARACTERISTICS OF CONCEPT MAP

- (a) A hierarchical concept map contains the most general concept at the top and the most specific one at the bottom,
 - (b) Cross links are to link different map segments,
 - (c) Examples are to clarify the meaning of a concept.
- In order to construct a concept map we must have familiarity with the general topic as well as an in-depth knowledge on a specific topic such as on software - based fault tolerant computing system here

A. Guidelines on Concept Map

While developing Concept Maps, we may follow the following guidelines in order to develop a good concept map:

- (a) To note the major concepts,
- (b) To note more specific concepts for each major concepts for grouping related ideas,
- (c) To inter link the major ideas,
- (d) To write linking words,
- (e) To do cross-linking between map segments (arrowhead for upward linking), and
- (f) To label these lines with linking words or phrases to form meaningful statements.

IV. CONCLUSION

Mental Sicknesses and Hygiene concepts and their relationships have been visually described lucidly by a Concept Map. This map is aimed for faster understanding of such complex concept. More specific concepts about Mental Hygiene could be described in details by other concept maps and those could be integrated for navigating between them through hyperlinks. Concept maps are very useful as a means for representing the emerging science knowledge and for increasing meaningful learning in sciences in contrast to simply memorizing the text. Representing the expert knowledge of individuals or of teams in research, government, and business and in education becomes easier by this useful concept map tool. It is also useful for collaborative knowledge modeling. It is to stimulate our idea generation and creativity. It is definitely carving out a strong position for brainstorming, complex ideas communication, and formal argument representation. Formalized concept maps are being used in software design or in UML. This is a first step in ontology building. This work would definitely be a significant step forward toward development of Concept-Map based Health Informatics.

V. REFERENCES

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