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Learning Methods based on Debris Learning

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Abstract **– With the rapid development of network technology and the rapid development of social networks, people get or transfer information which is more convenient. Fragmented learning has become a new way of learning chosen by a lot of people. However, due to the fragmentation of learning resources trivial, information noise, a wide range of knowledge sources, learning community instability, iterative fast, lack of authoritative guidance and other characteristics. Bring some obstacles to learners in which the depth of learning and knowledge management. So in this paper, the efficiency of fragmented learning does not meet the expectations of learners, but it is possible to reduce the concentration of learners. According to the characteristics of fragmented learning, we construct a reasonable fragmented learning reconstruction process. Better promote learners in the process of fragmented learning at the same time, the integration of knowledge to complete knowledge management, in order to enhance the fragmentation of learning efficiency and the construction of Knowledge network.**

Keywords **– Fragmentation, Learning Reconstruction, Learning Efficiency.**

I. INTRODUCTION

Fragmented learning[1-4] refers to the use of debris time to actively learn knowledge, work skills, self-improvement and other learning. Fragmented learning is often the most effective use of debris time, such as waiting bus, running time can be fully utilized to enhance the self, effective management time. The Northern Song Ouyang Xiu advocated learning to be at any time, every effort, even on horseback, pillow, toilet, also can't relax. Premier Wen Jiabao said in an online chat with citizens, "I very much hope to promote universal reading; I would like to see people in the subway when they can take a book." In the subway reading, this phenomenon, the essence of this is actually advocating the use of debris time to learn. In the spare time, people carrying smart phones and "wearable" equipment, take up a lot of debris time, in the massive information in the free shuttle to learn and get a variety of meaningful knowledge fragments. This reflects the current era, people's learning habits and behavior are quietly changing, human into the fragmented learning era.

II. FRAGMENTED LEARNING

Fragmentation is an image of the argument, and integration is the concept of opposition. Point to analysis of fragmentation (break up the whole into parts), point to analysis of integration (gather parts into a whole). Fragmented learning is from the whole "deconstruction" of learning content to knowledge "construction"[5-8]. The concept is to describe the abstract process as a figurative description of the word "fragmentation".

(1) Terminology related to fragmented learning

Terminology related to fragmented learning are: The era of fragmentation, fragmentation thinking, fragmented reading, fragmentation time, fragmentation, fragmentation management[9-13], fragmentation problem, and fragmented learning. In academia, scholars tend to have a consistent understanding of fragmented thinking, fragmented reading, fragmentation time, etc.

(2) Fragmented learning

Understanding of fragmented learning in the context of large data. On the one hand it refers to the convenience of new media, the discreteness of mass information content and the arbitrariness of the learner's reading mode in the era of large data, which enables learners to obtain knowledge fragmentation. On the other hand it refers to the use of fragmentary time, take short, flat, fast learning methods, which are mainly reflected in the learning time discontinuity, resulting in the acquisition of knowledge fragmentation. Compared to the traditional book learning, the two ways of acquiring knowledge are discrete, fragmentary, lack of holistic knowledge structure, so figuratively called fragmented learning.

(3) Characteristics of fragmented learning

Wang Chengbo and others believe that fragmentation learning "has the characteristics of learning content discreteness, the randomness of learning process and the discontinuity of learning time". These features are related to the narrow learning of fragmentation referred to earlier. Wang Mi, Yu Haiyan and others think that education initially tends to define the meaning of fragmented learning from content fragmentation. However, the developments of new forms of digital technology in the era of mobile Internet and the educational application of new media have fundamentally changed the learning space.

As a result, fragmentation learning has evolved from content fragmentation to learning behavior fragmentation, thinking fragmentation, and cognitive fragmentation. The fragmented learning is related to the era of large data, the emergence of new media, the change of reading paradigm and the development of micro-teaching resources.

First, the network information source channels rich and multiple, information content fragmented and incomplete, the learner perspective trend toward decentralization. Second, the accelerated pace of life and the emergence of "huge amount of data" forced people to change learning behavior and reading methods, people were forced into the era of fragmented reading. Third, the advent of new media provides a strong technical support for fragmented learning,

allowing people to learn by themselves without the limitation of time and space. Fourth, a large number of "Micro-video" "Micro-text" "Micro-curriculum" and other micro-resources in the fragmentation of learning to provide a large number of "short and fine" high-quality resources. Professor Zhu Ziting points out that fragmented learning starts with fragmentation of information to a greater extent, leading to fragmentation of knowledge, time, space, media, relationships, thinking, experience, etc. Thus, fragmented learning has the characteristics of content, time, space discontinuity and the diversity of media tools. These characteristics lead to the discontinuity of learning behavior, which determines that learning thinking is discontinuous.

III. Current Development

Smartphone and mobile learning is a perfect combination of new media and new learning methods, and the application of two-dimensional code and GPS can effectively solve the boredom of single classroom teaching in traditional education. The implementation of the traditional classroom teaching of a strong complement, but also to solve the distance learners can't be in person on-site learning difficulties, when the appearance of applications such as the micro-broadcast, direct podcasts and cloud live etc. The teacher can use the mobile phone as a live tool; the learners live on live, and share the learning process. This article takes the university student as the research subject, from the intelligent handset in the university student study main use, affects the university student to use the intelligent handset to carry on the study the effective factor, the influence of the gender to uses the intelligent handset to study. The impact of different grades on the use of smart phones for learning and the impact of liberal arts students on the use of smart phones to learn about five aspects of mobile learning based on intelligent mobile phone research. And the effective and flexible application strategy of mobile learning based on intelligent mobile phone is put forward, which can effectively and flexibly apply to subject teaching. As a tool to promote the reading of college students, the tool of collaborative communication and the tool of emotional stimulation, it will create a rich, diverse and ubiquitous multimedia learning environment for college students, enhances their interest in learning, and focuses on the cultivation of college students ' cultural attainment and information literacy, and realizing the deep integration of the mobile technology and the subject teaching is helpful to the study of the mobile learning by the university students in our country .Although fragmented knowledge is relatively simple and easier to absorb, the link between knowledge is interrupted, the system cannot be formed, and thus may be difficult to become effective. A large number of short, frequent, fast and illustrated fragmentation information further aggravate the phenomenon of information overload; increase the cognitive load and difficulty of the brain, leading to passive acceptance, lack of depth of thinking, distraction, and even cognitive biases and other undesirable performance. Fragmentation of information in a large number of false, poor, incomplete, inaccurate components produced information pollution phenomenon, occupied a limited time, shielding and flooded the real valuable information and knowledge. Fragmentation learning is disruptive to systematic learning. For example, in colleges and universities often appears a situation that teachers on stage and half of students play mobile phone under the platform. The knowledge acquired in the fragmentation time is fragmented, disordered and unrelated fragments, and the knowledge of individual fragments is not of high value, which requires the learner to "reprocessing" and "reprocessing" is the process of fragmentation knowledge to the new knowledge system.

IV. Advantages and Disadvantages

Fragmented learning is one of the common features of learning in the Internet era. With the development of mobile Internet technology represented by Smartphone, it has become increasingly a learning method promoted by young people. According to statistics from the Ministry of Industry and Information Technology in May 2014. In Baidu know "2013 summer homework inventory," data shows that 32% of students are using mobile phones to ask questions, compared with 200% increase over last year, is expected in 2014 handset side of the question will account for more than 60%. These data prove that the use of mobile phones and mobile internet to carry out fragmented learning has been increasing trend. In addition, the three major operators of China Mobile, Chinese telecom and Unicom have sped up the process of horse-racing in colleges and universities, in some buildings, such as teaching buildings, dormitory buildings, student canteen, library, gymnasium, etc, wireless LAN launcher dotted, in the building layout within the group of "hot spots". The wireless signal they provide allows students to sit in a classroom with high-speed Internet access, and mobile internet has quietly "invaded" the university classroom. Research shows that the mobile learning of the Smartphone as the learning terminal will become the mainstream of extracurricular learning or auxiliary classroom learning, and learners can study in any place (such as automobiles, subway stations, home, campus, classroom, etc.), and it will become the best learning way for learners to acquire additional knowledge.

4.1 The advantages of the fragmented learning method

(1) The learning time of fragmentation is more controllable and more flexible.
(2) Learning content is easier to acquire after being segmented.
(3) Learning time for fragmented learning is short and easier to maintain interest in learning.
(4) More convenient for the effective use of fragmentation time, knowledge of the absorption rate has been improved and other advantages.

4.2 The disadvantages of debris learning method

(1) Although fragmentation knowledge is easier to absorb because it is relatively simple, it may be difficult to function because of the interruption of the link between knowledge and the inability to form a complete system.

Give people the impression that they have learned a lot, but feel as if they have not learned anything.

(2) A large number of short, frequent, fast and illustrated fragmentation information further aggravate the phenomenon of information overload; increase the cognitive load and difficulty of the brain, leading to passive acceptance, lack of depth of thinking, distraction, and even cognitive biases and other undesirable performance.

(3) Fragmentation of information in a large number of false, poor, incomplete, inaccurate components produce information pollution phenomenon, occupy a limited time, shielding and drown out the real valuable information and knowledge.

(4) Fragmented learning interferes with system learning and also to make classroom teaching lost its previous attraction and importance.

V. Responses

The biggest problem in fragmentation learning lies in the fact that knowledge is not systematic, that the original link between knowledge fragments and debris is cut off or weakened, and it is difficult to play its due role. Of course, fragmentation of knowledge, if systematically organized on a regular basis can also form the systematic knowledge.

There are two ways to summarize and comb, one is according to the original subject knowledge system, the other is to break the original subject knowledge system, and focus on personal interests and problem-solving needs. The former is called recovery, the latter called Refactoring, both of which a processes that deposits in installments while are withdraw in lump sum. It can be said that is the basic principle and universal law to solve the problem of fragmentation.

Overall, fast-paced life and overloading of information are prompting us to shift from systematic learning to fragmented learning. Browse Zhihu, Weibo, WeChat, and so really learned things are not much, in the final analysis is not enough output, there is no targeted learning to think, not in-depth comprehensive mining problems.

Therefore, how to overcome the drawbacks of fragmentation learning is that we have to solve the problem. The best way to solve the problem is to focus on personal interests and problem solving, take full advantage of the fragmented time, and learning with a process that deposit in installments while withdraw in lump sum. This way of learning is the best way to learn in the network era. This learning method includes three stages of integrable ware writing, personalized rewriting and creative reconstruction.

1.1. The stage of "integrable ware writing"

At this stage, the learner first obtains the original information and knowledge fragments through the network search or other way, and after simple shearing, pasting and commenting, form a long or short article. Although these articles may contain some personal insights, they are primarily a restatement of the knowledge of the predecessors. Thus it is a primitive material, a small product, to the knowledge system we will build.

5.2. *The stage of "Personalized rewrite"*

When the accumulation of knowledge or information accumulates to a certain degree, our thoughts may produce some degree of qualitative change, showing that we begin to develop a preliminary understanding of these fragmentary knowledge and discover some of the commonalities and personalities. At this time, we should according to our own understanding, in our own language to rewrite the relevant articles. This rewrite is no longer a one-to-one relationship with the original "integrable", but may be a combination of multiple "pieces", expressed as a convergent tendency. It also includes the use of their own familiar concepts, languages and rules to personalize these fragmented pieces of processing and transformation in order to meet with the minds of the original personal knowledge system docking.

5.3. *The stage of "Creative Reconstruction"*

After the new knowledge fragments of personalized rewriting and individual knowledge system collide, if the new knowledge fragments just fit into the original knowledge system, it may be successfully accepted by the original knowledge system, become a part of the original knowledge system, will not lead to the change of the original knowledge system structure. If the original knowledge system can't be effectively incorporated, it may be temporarily dissociated from the original knowledge system. When this kind of free knowledge fragments more and more, the constant impact of the original knowledge system, it is possible in a certain moment to cause the original knowledge of the structure of the deformation or reconstruction, through another rewrite, these free knowledge system and the old knowledge system can be integrated together to form a new knowledge system. The formation of this new knowledge system is an innovative process for individuals. Creative reconstruction can be regarded as a higher level of knowledge aggregation.

VI. Conclusion

Fragmented learning is needed in the great data age. Regimented learning is an important way to acquire knowledge in the era of large data, and fragmented learning brings knowledge fragments to the reconstruction process of new knowledge system, and the reconstruction process of new knowledge system will have a far-reaching effect on fragmented learning method. This helps learners to use new information technology to improve their learning efficiency in the era of large data. Fragmentation is the result of continuous development of social and technological progress, centered on personal interests and problem solving, making full use of fragmented time and targeted learning with a process that deposit in installments while withdraw in lump sum. Makes it increasingly possible to use fragmented time to process fragmented information.

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