

# Self-Determination Online Learning (SDOL) Environment Evoking Pedagogical Innovation

Pi-Shan Hsu and Te-Jeng Chang

**Abstract**—Self-determination theory (SDT) explicates the relationship between human needs and motivation within the environmental social supports. Comparing with traditional face-to-face learning, in online learning environment the main advantage is to create self-determination context for flexible learning. The most important core resources of the era of knowledge economy are the "knowledge." How to base on self-determined learning and innovation, through the perceived value of the learning process to be translated into the value of innovation is the key to virtue or vice of the students' competitiveness. Therefore, how to develop the ability to learn self-determination is very important for college students, this study attempts to use the strategy of problem sets and online learning platform model, it be utilized to provide students self-determination online learning (SDOL) system, and further to explore the thinking ability.

**Index Terms**—Self-determination theory, online learning, pedagogical innovation

## I. INTRODUCTION

According to Dewey, human thought starts and ends with experience, which is an important source for humans to create knowledge. Therefore, how to create a "real" or "authentic" learning context with problem space and exploratory activities to bring in students' experience [1] has become a great challenge for educators who design learning activities. Such a challenge can be well met with the aid of technology by constructing a multi-media environment with text, pictures, images, animation, and music in it.

Several factors play critical roles in the construction of knowledge, including the interaction between the learner and the outside environment, the individual's reflections on hands-on activities, and the social interaction between the individual and other cultural individuals. Based on constructivism, the learner assumes an active role and is capable of constructing meaning from learning. Situated learning may help in this aspect by providing a virtual learning environment so that the learner may construct his or her own set of problem-solving strategies during the learning process [2], thus attaining the highest goal of "learning how to learn", i.e. a process of self-regulation. In the technology-based learning environment learners develop knowledge of their own through the process of actively exploring and constructing self-knowledge. Meanwhile, the

learning environment benefits learners by facilitating the process of knowledge construction, providing opportunities for the learners to use their own knowledge to explore, solve problems or make decisions. The ultimate goal is to help learners become scientific explorers, critical thinkers, systematic problem-solvers, and value-oriented decision-makers. Through the opportunities created by the learning environment, learners recognize the strategies of implementation, move toward their learning/task goals step by step, and eventually reach the state of goal realization.

## II. INTEGRATED EXPERIENCE THAT REFLECTS THE REAL WORLD

The learning environment should provide abundant and quality opportunities for exploration and hands-on practice in order to allow learners to discover the relation between messages, organize the messages, comprehend relevant concepts and make use of those concepts to solve problems for their own needs. During such a learning process learners may not only make the best use of acquired knowledge, retain self-constructed knowledge more easily, but also personally experience the best ways of discovering knowledge. By providing learners with an easy access to the real world and with challenging and rewarding learning resources that are related to life experience, the technology-based learning environment makes learners feel that they can control their own learning problems and that they are learning something useful and practical, thus increasing learners' motivation to actively explore. How to implement curriculum integration by means of the technology-based learning environment and how to cultivate new age citizens who can think and learn actively have consequently become one of the major concerns for educators today.

Through real-world situation learning, learners are able to connect knowledge with prior experience and proceed with the integrated recombination and construction of self-concept, which can greatly benefits the learners in their future learning transfer. Meanwhile, learners will realize that knowledge is omnipresent, easily accessible and closely linked with their everyday life. In the future curriculum teachers should play the role of an accelerator or a facilitator by providing learning directions for the learners, offering timely support, and helping learners plan or modify their learning. Correspondingly, learners will be transformed from passive recipients of knowledge to ones that are actively engaged in exploring knowledge. Learners will undertake learning in cognitive, attitudinal and psychomotor domains with the materials and controversial issues that are easily accessible to them. They will go deeper into the key of a problem, solve the problem, and finally achieve a higher order of learning.

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The interaction between the learner and the outside environment, the reflections of individual on hands-on activities, and the social interaction between the individual and other individuals – these are all important steps that influence the construction of knowledge. Therefore, a good learning environment should provide ample and quality opportunities for learners to explore and practice so that they are able to find out for themselves the relation between messages, organize the messages, and comprehend the concepts. Only when learners actively interact with the entire surroundings can learning efficacy is achieved. The developing of technology-based learning materials should emphasize high interaction learning environment with the function of experience sharing and discussion. Furthermore, it should provide feedback systems, facilitate learning transfers and increase learning effects. In this regard, the world -wide web allows a wider variety and outlook of cultural learning with its high interactivity, borderless feature and assembly of different learning groups. In addition, it can supplement the inadequacy of any learning materials and minimize cultural differences. By generating more feedback and allowing experience sharing and problem exchange, the Internet thus promotes social interaction.

### III. SELF-DETERMINATION ON-LINE LEARNING (SDOL)

Based on self-determination theory (SDT), can be expected that more regulation within the type of motivation will lead to sustained positive behavior [3], and by three to meet the psychological needs of individual situations, as well as the intrinsic motivation can be maintained outside the motivation into the more basic characteristics of self-determination [4]. Intrinsic motivation were closer, the more self-determination for the behavioral characteristics of motivation, whereas the more those who deviate from intrinsic motivation, self-determination is not with the motivation of behavioral characteristics. The so-called motive internalization refers to no motivation, external regulation into a inner adjustable qualification process, which people have taken a value adjustment qualification process [5], is an individual to from the outside world of beliefs, attitudes and adaptive behavior into becoming their beliefs, attitudes and behavior. Internalization occurs only in the individual is motivated to accept, and had not converted their own values and behavior is completely assimilated into the self [1], so the SDT applied to education context, the emphasis in the social and environmental damage will contribute to intrinsic motivation and the factors that can affect the individual's self-determination behavior. Therefore, the SDT attaches great importance to the student's personal inner resources for enhancing intrinsic motivation and enhance learning behavior of the results. Summary above, this study defines "self-determined learning" in accordance with [3], [4], [5] point of view, emphasizing self-determination according to the degree that people will have different motives in different types of regulation, in which basic needs into three psychological needs.

Here, in this study through literature analysis, assuming that "self-determined learning" through the social context of

interaction with peers and teachers, affect the student's basic needs, it is required to meet the three psychological needs of the individual, and if the three requirements can be met, the student's degree of self-regulation can be improved, and thus will affect the students' positive learning outcomes; the other hand, if three requirements cannot be met, teachers need to control the students, to enhance the control and regulation therefore, likely to lead to negative learning the effect.

### IV. CONCLUSIONS

Individuals began to independently produce the target behavior, even if the individual is not competent or that there is no will, the individual because of the emotion you want to be linked with the environment, arising from regulation of motivation into behavior. Regulate behavior and identify the motives for the value of the target behavior. Individuals that engage in the conduct the result is good, some organizations have social value or value, and he is confident that the expected results, to identify with independently adjustable so motivated behavior. Integration not only regulate behavior and motives of the value of the target behavior, and the value of the target behavior in line with personal values. Individuals have self-confidence can have a value in line with the results of self-produce integrated adjustable so motivated behavior. No motive is not the individual engaged in the behavior of interest, or even bored. The behavior of individual intentions is not enough, nor will engage in behavior. No motivation for the behavior of individual self-expression occurs in a lack of confidence that the environmental conditions in which to issue the desired behavior of the target, the individual for the low level of self-determination, that the environmental conditions in which the freely expressed will not even forced to accept and engage in behavior and environmental conditions in which the individual does not agree. No motivation to act on its behavior values and personal values do not match, or even that the behavior of the value is of no value. Self-feeling is the ability to grasp the sense of individual environmental conditions that can be sure to get the desired result and the pursuit of self-efficacy.

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