

# A Study of Theoretical Framework on the Perception of Web-based Self-directed Learning Environment

RONG-JYUE FANG<sup>1</sup>, HUA-LIN TSAI<sup>2</sup>, CHI -JEN LEE<sup>3</sup>, YI-HSING CHANG<sup>4</sup>, TIEN-SHENG TSAI<sup>5</sup>

<sup>1</sup>Chair Professor, Department of Information Management, Southern Taiwan University of Technology, Taiwan

<sup>2</sup> Department of Information Management, Southern Taiwan University of Technology Taiwan

<sup>3,4</sup> PHD, Department of Industrial Technology Education, National Kaohsiung Normal University, Taiwan

<sup>5</sup>Graduate student, Department of Industrial Technology Education, National Kaohsiung Normal University, Taiwan Taiwan

\*No.188, Zhong yi St., Fengshan City, Kaohsiung County 830 Taiwan,

[\\*kittyhl@gmail.com](mailto:*kittyhl@gmail.com)  
[rx26@mail.stut.edu.tw](mailto:rx26@mail.stut.edu.tw)  
[yhchang@mail.stut.edu.tw](mailto:yhchang@mail.stut.edu.tw)  
[mickeylee@gmail.com](mailto:mickeylee@gmail.com)  
[mullis@pchome.com.tw](mailto:mullis@pchome.com.tw)

**Abstract:** The purpose of this study is to develop the theoretical framework on the perception of web-based self-directed learning environment. The research objectives are to identify the structure categories, dimensions, and aspects for the perception of the environment. An extensive literature review was conducted as the research method. The results include 3 system categories, 5 dimensions, and 13 aspects in the framework. The 3 system categories are system environment, interactive relationship, and personal development. The 5 dimensions are internet resources, web-based functions, peer interaction, learning content type, and self-directed learning. The study also presents the 13 aspects of the structure in the system model. The findings and recommendations can be provided for further related studies and teaching references.

**Key-Words:** Environmental perception, self-directed learning, web-based learning

## 1 Introduction

Student not only passive receiver in several studies environment. They should be positive participator, also is the initiative establishment study system team member.

Therefore good several learning environments, besides computer soft hardware coordination, but also must aim at present the teaching material, the teaching method, the learning environment and so on performs the suitable adjustment and the transformation only then sufficiently displays the function.

Many theories and the research confirmation, the group cooperation study, regard the news video and music conversation, study diary writing, with on-line teaching way and so on discussion may assist The study development study society group, the enhancement study multiplication and the initiative communication exchange effect can have the positive effect to the teaching and the study function display

Fruit, also increases the choice space in passing which the student studies.

Goal of the this research namely lies in correlation of literature the discussion web-based self- learning environment consciousness theory, constructs theory of overhead construction the construction web-based self- learning environment consciousness. Specifically says, goal of the this research as follows:

First, system categories of the determination Perception of Web-based Self-directed Learning Environment.

Second, dimensions of the construction Perception of Web-based Self-directed Learning Environment.

Third, aspects of the development Perception of Web-based Self-directed Learning Environment.

## 2 Environment perception theory

### 2.1 Reciprocal determination

Albert Bandura is a social psychologists. He thought the human behavior the determining factor contains three kinds: 1.personal determinism; 2.environment determinism; 3.interactionism[1].

His theory thought the person, the environment and person's behavior itself three correlations, have person's following behavior. And thought the complex behavior the study certainly cannot simple bidirectional relates by the environment and the individual explained, because the environment too are many to the behavior influence, involves to each kind of intrinsic individual factor, these individual factors can affect the environment behavior the function. Therefore advocated reciprocal determination.

The reciprocal determination is one kind complex, the synthesis human behavior theory. Pays attention to Yu Jen's function, notes each kind of home affair and the external event reciprocity, And attempts to the internal condition, the external condition and the individual behavior is complex mutually depends on for existence the relations to propose may examine supposition.

Therefore in the reciprocal determination, the person, the environment and person's behavior itself three each other interaction, and attempts to the internal condition, the external condition and the individual behavior is complex mutually depends on for existence the relations to propose may examine supposition.

By Therefore advocated viewpoint view it, the environment is three to one of center important factors, therefore this research three to relates by "the interactive determinism" took category of the discussion environment consciousness, by above may know, in the study process, understood environment of consciousness student is important. Supposes.

## 2.2 Study environment theory

The publication, **Evaluating educational environments**[10], emphasized the environment to the student behavior and the manner influence importance, and proposes the concept overhead construction.

The environment concept, showed person's study, is under environment stimulating, for achieve the change the behavior, the goal, but produces change and influence. In the environment, the individual regarding the environment consciousness strong and the weak, the type sensitivity of, all can affect scope of the its change. But based on this theory, may know the external environment to lie in the study environment of consciousness the study

study regarding influence factor, from this indirectly discusses the study study correlation factor, therefore discussion study environment consciousness, has its necessity.

## 3 Web-based learning environment study pattern and characteristic

The learning environment appraisal, origins from **Harvard Project Physics**[10], and **Social Climate Scales** [9]. After this, namely has many is published one after another with the learning environment correlation research.

In the traditional study pattern may discover the teacher affiliation competes by the associates promotes the study motive, but constructs the construction principle to emphasize penetrates the associates cooperation and the social interaction in the study process, arouses student's interest and promotes the study effect. In the web-based study study process, could not be separated from the above two kind of studies pattern.

Therefore in the web-based learning environment mainly divides into: Behaviorist Internet-based Learning Environment (BILE), Constructivist Internet-based Learning Environment (CILE), Hybrid Internet-based learning environment (HILE).

Chou, C.J, & Tsai, C. C. [5] thought the web-based learning environment the characteristic, constructed the construction to promote the student in the dissemination science and technology progress independently to study, exploration study, and cooperation study opportunity. Because the web-based teaching system is an open learning environment, therefore the student may penetrate the web-based study at any time and place, but does not need to receive the time and the place limit.

Several learning environments which conforms to the teacher teaching, the student studies can make teachers and students each other to be easy to link up, the promotion study atmosphere, only then achieves the study the highest result. Therefore in the web-based self-learning environment, should understand the study consciousness of relations regarding the learning environment, from the person, the environment, the behavior three to carries on the discussion, understands the study environment consciousness if to study between the relations.

## 4 Self-Directed Learning theory

The self- guidance study main spirit for is responsible to own study. Most widely uses is the definition which proposed by Knowles:

*Self-directed learning has been described as "a process in which individuals take the initiative, with or without the help of others," to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes[7].*

Knowles[7] thought the study is the intrinsic course, the individual self- guidance may create the best study.

Individual orientation mainly is emphasizes the study self-guidance the personality special characteristic, also is one kind of ability. Guglielmino[6] thought each people all have the self-guidance personality special characteristic, such special characteristic each person how many is different.

Brockkeet & Hiemstra [3] conformity process orientation and personal orientation, but proposes Personal Responsibility Orientation Model (PRO). PRO pattern emphasis: (1) Personal responsibility; (2) Self-directed learning; (3) Learner self-direction; (4) Self-direction in learning; (5) Social context. May know the PRO pattern is pays great attention to individual the intrinsic factor and the external factor union forms Self-Directed Learning, specially social context, suddenly has revealed the study is the environment influence.

The comprehensive survey above definition, the scholar respectively has the different angle view to the self- guidance study viewpoint, only no matter from where plants the angle view, its study must personally carry on by study itself, coordinates the oneself intrinsic study wish, the motive and the personality special characteristic, and the external study situation, the study demand and the interpersonal relationship and so on various aspects guidance and the support, take strengthens the self-study the ability and as own study responsible ability.

Has this, we may induce "the self- guidance study are possibly one kind of course, may be one kind of personality or the psychological special characteristic, also commonly used expresses one Plants the study condition ". In the web-based self-learning environment, the study self- study is the important manner, therefore must friendly with oneself lead in the education To the study strategy, may refer to the self- guidance study course the way - contract study, and the consideration different self-guidance ability uses the different guidance The way,

enables the study to grasp the learning environment, the study process, understood self- with the study result, and performs to understand study environment of consciousness, and depends on Its three to the relational operation, can let the study be even more progressive.

## 5 Theoretical Framework on the Perception of Web-based Self-directed Learning Environment

### 5.1 System Categories

Albert Bandura [1] thought the complex behavior the study certainly cannot simple bidirectional relates by the environment and the individual explained, because the environment too are many to the behavior influence, involves to each kind of intrinsic individual factor, these individual factors can affect the environment behavior the function. Therefore proposed "the interactive determinism", in its pattern, the behavior, the individual and the environment all is the achievement mutually staggered determining factor but the function.

Moss [10] emphasizes the environment to the student behavior and the manner influence importance. He thought "the environment-study" has contained the environment system, individual system, the intermediary factor and adjusts suitable and the adaption. However may discover the intermediary factor appraises and intensifies individual for the individual cognition and the environmental factor each other influence, moves suitably with the adaption is the individual in order to adapt to circumstances or environment the study behavior which forms, therefore its intermediary factor and moves suitably may induce with the adaption forms a line for the system.

In summary, may know the influence environment consciousness the factor actually is the environment, the individual, the behavior each other correlation, therefore oneself studies the link in the web-based In the boundary consciousness theory overhead construction, may analyze its category to be supposed for the environment, the individual, the behavior to constitute, like Fig 1 shows.

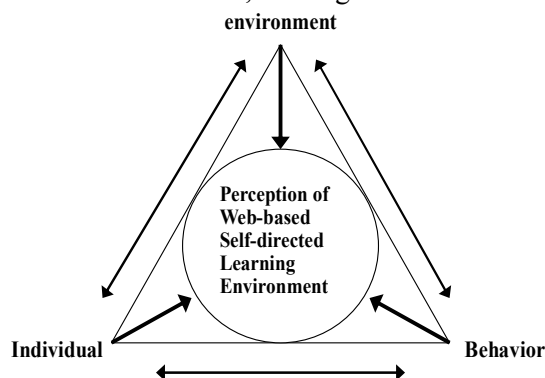


Fig 1. Perception of Web-based Self-directed Learning Environment form factor

This research based on Ban Tula, touches Si's theory, and based on the self- guidance study and the web-based learning environment correlation data, performs three big categories to revise In order to conform to category of the web-based self- learning environment consciousness theory overhead construction, forms the system environment, the interaction relations and individual development study, like Fig 2 shows .

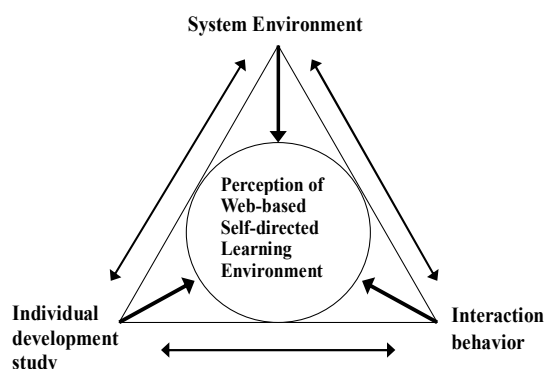


Fig 2. Perception of Web-based Self-directed Learning Environment system categories

## 5.2 Dimensions

This research main discussion for general study its web-based self- learning environment consciousness theory overhead construction, therefore refers to other scholars' literature to propose the argument - (1) the web-based learning environment design, must let the student obtain from the problem solving activity knows , and by its itself with in with own interaction during, constructs constructs belongs to own idea. (2) the web-based learning environment should encourage the student in the solution question process, makes the content the abstract. (3) the web-based learning environment should take the student as a center, must coordinate the student real living conditions.[4][5][8] Reorganizes 5 dimensions,

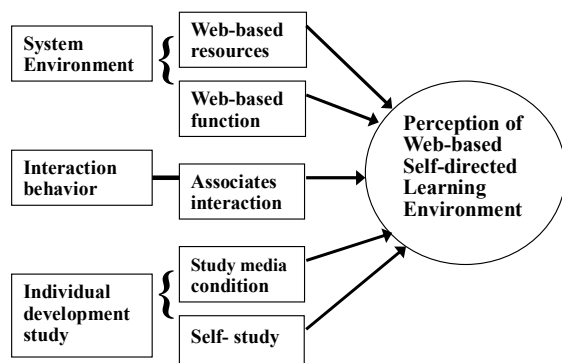


Fig 3. Perception of Web-based Self-directed Learning Environment influence factor

contains the web-based resources, the web-based function, the associates interacts, the study content condition, the self- study, and revises 3 System Categories for the system environment, the interaction relations, individual development study, like Fig 3 shows.

## 5.3 Aspects

Several studies needs the affiliation by several tools, and penetration wired or wireless web-based, takes the answer position teaching material, carries on the on-line or the off-line learning activity. Says regarding the study, the web-based study has provided the study more studies opportunity, therefore the study must first establish the study the interest, and is initiative From the on-line gain information, raises explores and innovates the spirit.

Rests on the above definition, may analyze the web-based resources two mainly to, is aims at the objective external environment use influence the hardware equipment To, another is easy by the user intrinsic stratification plane use influence resources to use and usefully.

Has this, in web-based function dimensions, the discrimination is two aspects belongs to the bidirectional form, another is the unidirectional form, two Plants the form transmission knows way quite same not less than, the bidirectional form stresses the interaction, the unidirectional form stresses the straight transmission, this two types line web-based tool, needs to look how the user and the teaching to utilize.

Interacts dimensions in the associates, the study penetration web-based platform bidirectional form and the associates carries on knows the share to construct the construction. And can study and the other people Knows does links, in order to a faster conformity more widespread knowledge , provides participates in society the group partner mutually to exchange together, diverse knowledge biography Hands over information which the origin and needs.

In summary, the associates interact face to be possible to differentiate 3 aspects, its one is the team cooperation study, its two crowds of groups discuss carry on the study, its three Forms the web-based study society group, mutually transmits knows with the exchange experience, cooperation study and the group discuss in the traditional teaching the utilization ratio is high But also has divided into the cooperation study form and the group competition form.

The study media condition is refers to the study to accept regarding the web-based learning environment. Although several studies may achieve the not far not session of study, however is new The

technical several studies says regarding the study result, has not been able very firmly to be definite can achieve the effective study, because of this correlation to study Regarding several studies

Therefore study media condition dimensions differentiates aspects, is presents the degree and the study take the homepage accepts as the discrimination, the institute By may decide as the study in this stratification plane which the study likes to tend to aspects.

Finally the self- study part, is aims at the study self- guidance study the custom. The self- guidance study viewpoint respectively has the different angle view In any event, its study must personally carry on by study itself, coordinates the oneself intrinsic study wish, the motive and the personality special characteristic, And the external study situation, the study demand and the interpersonal relationship and so on various aspects guidance and the support, take strengthens the self- study the ability and as own study Custom responsible ability.

Receives states, self- study dimensions, should carries on the discussion from the individual as well as the behavior, therefore the discrimination is two big aspects, in individual In aspects, but also may differentiate for the motive as well as the goal, in behavior aspects, also may differentiate the study method with to continue. Therefore oneself Study aspects then formed - the individual - motive, the individual - goal, the behavior - study method, the behavior - has continued, this four aspects.

## 6 Conclusion

An extensive literature review was conducted as the research method. The results include 3 system categories, 5 dimensions, and 13 aspects in the framework. Therefore, the theoretical framework on the perception of web-based self-directed learning environment like Fig 4 shows.

Will study by several carries on the education is the future inevitable development tendency, when study utilization web-based self- study, its environment consciousness to its study Inevitably will have the influence. By way of this research may know the web-based self- study knows theory of overhead construction the environment consciousness, is the humanity uses the science and technology to produce One of study cultures, but the future will utilize several studies the protestantism study condition center, how will the teaching friendly strengthen the study environment of consciousness with, promotes Study study. If can theory of

overhead construction by way of this research, then the development following correlation research, even develops to have the letter, effect and Chang Mu meter, believed may and the study has the help to the teaching. Only has properly, the suitable utilization science and technology facility assists the student the study and The teacher is engaged in the teaching, is faces technical the correct manner.

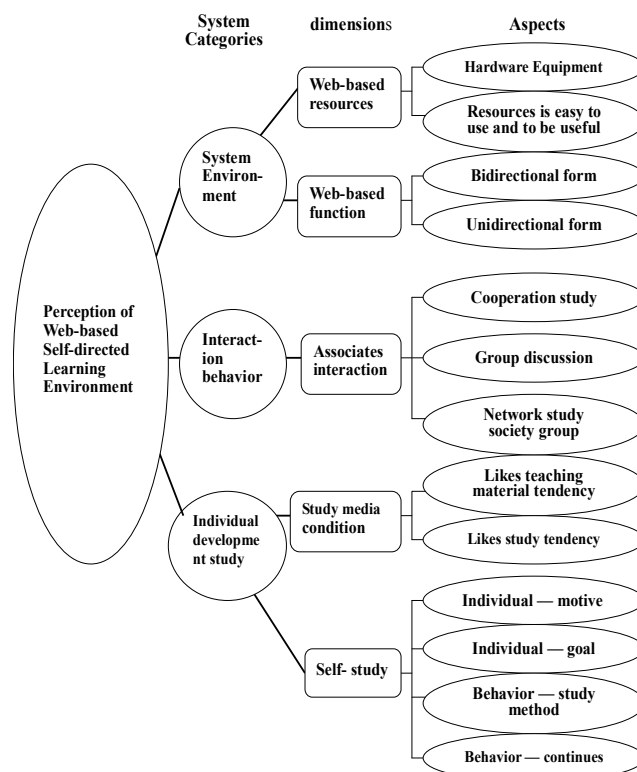


Fig 4 Perception of Web-based Self-directed Learning Environment composition

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