

# On Cultivating Autonomous Learning Ability for University Students Based on Web\*

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**Abstract**—Autonomous learning has become a widely adopted pedagogical approach to language learning and teaching. This paper analyzed the factors that constraints the cultivation of college English Autonomous Learning from cognitive level, psychological level, technical level, and social level. Undergraduate students and college teachers were investigated via questionnaire and interview. The survey found that there are typical bottleneck constraints, teachers' lack of curriculum autonomy, lack of evaluation mechanism on autonomous learning and limitation of communication between teachers and teaching administrators. Solutions are offered afterwards.

**Index Terms**—autonomous learning, constraining factor, web

## I. INTRODUCTION

In view of the current situation of College English education, that is, listening, reading ability is not ideal, speaking and writing output ability is weak. Higher Education Department issued College English curriculum requirements" in January 2008. It is hoped that through the "personalized", "autonomous" learning and teaching strategies, college English teaching reform can be implemented.

Students speaking and writing ability is still weak in spite of much time spent on teaching, which indicates students' application or output ability should be enhanced. There is a misconception that learning after class is students' business, not as significant as teaching in class. Thus teaching reform just focuses on improving teaching in class. Learning by students themselves has been ignored consciously or unconsciously by teachers and students. As for students, they often perceive university teaching, learning and assessment discourage rather than encourage autonomy.

Modern education is experiencing great changes such as education for all changing into learning for all, ability-oriented into value-oriented, curriculum-centered into student-centered, knowledge teaching into innovation cultivating, and the use of information tools into reform of teaching mode. All students are supposed to become people with lifelong learning ability and habit. Under such circumstances, our teaching is to be reformed to satisfy current needs and deal with those changes. In information age, many modern technologies have been applied in the education but proved not as effective as expected. One reason is that the structure of education is not converted at all with the development of information technology. Currently, student's learning is still mainly charged by teachers. This is a wrong way of learning and teaching. Since learning is a constant process, students may learn any time or anywhere. Their learning does not just happen in class, but outside class. One who does not know how to learn and when to learn will be left behind. Modern talents are ones with the ability of sustainable development. This ability is not acquired and trained by in-class teaching but by the cultivation of autonomy.

Nowadays it is widely accepted autonomous learning is a way for students to learn actively and effectively. During the process, students will gain the ability of lifelong learning and sustainable development. With the development of information technology, the task of teachers is not to teach but let students experience and participate in the exploration of knowledge. Korea, USA and many other countries place emphasis on cultivating students' ability to solve problems via information technology. It is very imminent event to make use of modern information technology to guide students to experience knowledge then become a network video beneficiaries rather than the victim. So teachers' guidance is indispensable, for students lack self-discipline, self-regulation and due effectiveness in autonomous learning.

## II. AUTONOMOUS LEARNING

The essence of learning is meaningful learning. Learner is the main body of learning. Interpersonal relation is a significant condition of effective learning. Meaningful learning involves such four elements as individual participation, self initiation, permeability and self-assessment. Learners learn knowledge via spontaneous devotion to study, choosing their own learning strategies and manipulating learning process, giving full play to their emotional and cognitive potential. Humanism regards cognition and emotion as two complementary aspects concerning human all-round development, for the purpose of education is not only to teach students skills, but according to the needs of students

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allow them to develop in knowledge, emotion and motivation so as to cultivate their healthy personality.

Based on the implication of learning, autonomy is the best choice, for autonomous learning concerns cultivating emotional and cognitive potential.

Autonomy is seen as a main goal for language learning. Cultivating students' learning autonomy has become the main purpose of language teaching. Many programs are designed to conduct experiment with the purpose of promoting autonomous language learning. Learner Autonomy is interpreted as learner control over learning, which includes awareness of goals, making learning plan, taking responsibility for learning content, active participation in the learning process and regulating such factors as time, frequency, setting, learning method and pace of learning.

Autonomous learning is based on the ideas of constructivism and humanism learning theory. Constructivism learning theory believes that learning is a process of acquiring knowledge, and knowledge is not obtained by teachers' teaching, but by learners in certain situations, the social and cultural background, with the help of others, including teachers and learning companion via necessary learning materials through the way of meaning construction. Humanism learning theory think learning is with the help of teacher a process of self-assessment, self-promotion and self-assessment. Therefore, we should transform the teaching process into learning process, fully mobilize students' intrinsic motivation and learning potential, create harmonious interpersonal relations, promote students' self performance evaluation and help students satisfy the needs of self-actualization. Besides, the theory of distribution learning contributes to forming of learning community. This is not contradictory with autonomy, which does not imply learning alone. On the contrary, autonomous learning may involve learning together with teachers or any partners. The theory of distribution learning believes that knowledge is distributed, which makes cognitive development of complex tasks completed by sharing knowledge and resources. In general, the distribution of learning is superior to focus learning. Learning Community, based on the ideas of theory of distribution learning, accomplish tasks with partners of the same learning goal and interests by sharing mutual creativity, ideas and experiences.

#### *Domestic research*

Domestic research involves aspects as follows: (1) Chang, M.M. (2005) explores the use of computer network of the new independent learning teaching model, there are 9 papers which account for 39.1%; (2) study of creation of personalized autonomous learning environment under the assistance of computer network, such as autonomous learning center, autonomous learning system, diversified learning environment and English website as tools. The articles of this aspect account for 30.4% (Cheng Xiaotang & Kang Yan, 2010). (3) The rest of the study involves such specific aspects as the role teacher plays in autonomous learning, writing autonomous teaching and listening autonomous teaching, evaluation of teaching, learning strategies and learning effectiveness (Hu Wenzhong & Sun Youzhong, 2006). As a whole, to promote the construction of autonomous learning development of hardware environment and explore a new teaching mode based on the environment reflect the trend of English Teaching Reform in the new situation.

#### *Overseas Research*

The research concerning autonomy overseas involves the following aspects. Benson (1997) believes autonomy can be located at technical, psychological and political level. Autonomy can be seen as a goal common to all academic disciplines (Boud, 1988). It emerges with the increasing need of learning skills. People require the capacity to produce something new instead of receiving something that is known. Boud and other researchers show some university education does not encourage but discourage autonomy (Ramsden, 1989). A recent study from Harvard University indicates that more experienced teachers-teachers who teach many years prove to be inefficient in teaching compared with younger one to some sense. This is related to information technology, for those experienced teachers are less skilled in applying teaching software.

### III. METHOD AND DATA COLLECTION

This research employs the form of the questionnaire and interview. In this questionnaire ten questions are designed. Each of the questions involves an aspect about autonomous English learning. From these questions, people's attitudes and suggestions towards autonomous English learning are studied. This research involves students from universities in Wuhan. The questionnaires are distributed to 300 students. Ten teachers are interviewed. A total of 288 individuals fill in the questionnaires, among which 282 are valid. They cover different grades and majors, so the result can stand for typical point of view to some degree.

### IV. RESULTS AND DISCUSSION

A total of 292 individuals participate in the survey, 282 students and 10 teachers included. It is found that some constraining factors exist in cultivating autonomous learning. The constraining factors are as follows.

#### *A. Constraints of Teacher Belief and Learner Belief*

It's long been practiced that student learning has been arranged by teachers. Thus students are accustomed to following teachers' instruction. Teachers tend to be the center of teaching, assign all and establish all, control learning content, pace, time etc. This teacher-centered teaching model can't meet learning today, for it is presumed each child need the same pattern of learning. Now this belief is no longer appropriate. It can't satisfy particular needs of students

(Horwitz, E.K, 1987). What teachers teach may not be what students need. So teacher belief hinders the cultivation of self autonomy. Students with the help of teachers should change learning belief as well (Ho,J.&D.Crookall,1995). The times depending completely on teachers is over. Students used to think they only need to do what teachers tell them to. However, autonomous learning requires more, which involves the ability to design learning content, manage time, choose learning method and control the process of learning.

#### *B. Constraints of Curriculum Autonomy for Teachers*

This involves such aspects as curriculum structure constraints, quantitative measurement constraints and executive constraints. Curriculum design is much too specified, which leaves too little time for self autonomy, both for teachers and students. Curriculum is established by executive department. Top-down one way communication between teachers and executive department exists. Teachers' teaching performance is assessed completely quantitatively. Teachers can't make drastic change in teaching content and teaching periods. Accordingly under the circumstance, students do not have too much room for autonomous learning. Therefore, too much intervention is not encouraged on the part of executive department.

#### *C. Constraints of Evaluation System*

College English autonomous learning challenge the traditional evaluation testing system (Morrison, 2005). Who evaluates? What is evaluated? How to evaluate? There is lack of reliable assessment of autonomous learning. At present, the research on the autonomous learning of College English in China has not emphasized formative evaluation. The formative evaluation is not considered as an integral part of autonomous learning and teachers even do not discuss how to evaluate autonomous learning. In this case, there is a lack of evaluation system in the cultivating autonomous learning in China which leads to the state of being out of order for autonomous learning. In addition, current evaluation system online is designed for students to evaluate teachers instead of teachers evaluating students. Teachers usually evaluate student offline instead of being online. Their way of evaluation is fixed and difficult to change. Static way of evaluation is not as good as dynamic online evaluation which is very convenient to modify according to changing situations. Student information is not easily saved or modified based on the traditional way of evaluation.

Evaluation should not be based on one or two fixed aspects but many aspects. It should be done many times to ensure the effectiveness of learning and teaching. Teacher evaluation and student mutual evaluation can be combined to form final evaluation.

#### *D. Constraints of Technical Level*

Teachers are not proficient in computer operation and software application. This is shown in one of researches conducted by Harvard University. Some teachers would not like to adopt a new method of teaching based on information technology, for it takes time for them to apply a new software and prepare teaching in quite a different way. They may not be skillful in the application of software, which is a challenge for them (Luke, C. L, 2006). Teachers lack technical training. Thus students lack the guidance because of teachers' inexperience of software application.

Teachers' teaching methods are not presented or adjusted according to developing modern information technology, such as the lack of flexible application of the teaching software, the lack of application innovation in multimedia technology and teachers' over reliance on PPT. Network teaching hardware environment does not match new model, and some hardware are not up to date, unlikely to be employed effectively in teaching. Network teaching resources are not fully utilized, such as the inflexibility and low intelligence of teaching platform and the inadequate individualized teaching resources. The college English curriculum is inconsistent with teaching objectives and the application of information technology.

As for students, it is investigated that they need guidance concerning how to conceal Chinese subtitle when watching English movies and how to choose effective internet materials and chat online with foreigners. How to set time limit, how to download useful and free information, how to search special corpora to confirm some language usage for study or for research are to be solved.

Besides, there is lack of communication between teachers and students out of class. A reliable technical platform is needed to guarantee communication online between teachers and students.

#### *E. Lack of Research Concerning Needs*

Students' needs have long been ignored. Most teaching practices are often carried out from the perspective of teachers. Teachers' teaching design lacks students' participation. As a result, some teaching content and activities are not to students' taste, making teaching ineffective. Students have no chance to express their needs. Teachers do not investigate various needs, such as the needs of male and female students; needs of learners in different grades or levels and needs of different majors. Sometimes teaching is far from these needs, for curriculum design is not in accordance with the social requirement.

On the whole, the constraining factors such as the lack of teacher belief and lack of evaluation mechanism and lack of training lead to inadequacy of autonomous learning for students. The cultivation of extracurricular autonomous learning ability and the role computer network can play in autonomous learning are not fully explored.

## V. THE SOLUTION TO PROBLEMS CONCERNED

### A. *Change Teachers' Belief and Students' Belief about Learning*

Therefore teachers should change teaching belief, leaving students room to develop the habit of managing their own learning. During the process, teachers can offer help and guidance. Lectures or reports can be held to help students be aware of the importance of autonomous learning. Students also should be aware they themselves are mainly responsible for their own learning and learning process involves students' active participation and teachers' participation. Students should be trained in their learning strategies and theories under the guidance of teachers. The primary focus of teachers in information age should be on helping students to design their own learning goal, learning content, learning rate and learning objective. Teachers are not in charge of learning alone. Students are heroes or main characters in learning, teachers like directors.

### B. *Change the Way of Communication between Teaching Administration Department and Teachers*

Two-way communication between executive department and teachers is encouraged. Executive department should listen to teachers' opinions frequently and respond to teachers' and students' needs actively. Teachers' performance should not be judged completely quantitatively. Scientific ways are to be employed to evaluate teachers. Hence teachers will have choices to guide and reform autonomous learning without much restriction and interference of teaching administration. Bottom-up teaching administration is expected to improve the efficiency and advocate democracy.

### C. *Improve Evaluation System of Teaching and Set Two-way Evaluation System*

In the past decade, learner autonomy, as a remedy for the conventional problem of teacher-centeredness, has already found its way to the Chinese national English curriculums at all levels. Also, in a counterattack against the test-oriented teaching, formative evaluation, has been recommended as an alternative means. Learning portfolio is established in the hope of tracking the learning process thus promoting learner autonomy. Besides, learning portfolio via internet is easily updated, which helps students learn about merits and demerits of their study.

Focus can't be on language points or quantitative language structure in student evaluation. We need to come up with ways to test students' learning ability, cultural cognition and the essence of language. Formative evaluation is a way to display students' process of learning. The evaluation can be dealt with elaborately by computers. The evaluation should involve many aspects such as learning objective, learning pace, learning effect and learning content etc. Nowadays many schools have set up evaluation system online with the purpose of students evaluating teachers' performance. However, evaluation system is likely to be misused by students. Students will evaluate teachers carelessly or highly for fear of offending teachers. Thus real response from students is not obtained. Under such circumstance, some measures can be taken. On the one hand, face to face and frank interaction between teachers and students can be organized to ensure the effectiveness of evaluation. On the other hand, online evaluation is to be designed for teachers to evaluate students' performance in autonomous learning, which is in need. Online evaluation can include many aspects of students which can be updated. This makes a formative evaluation. Students are informed of their daily performance and daily progress. Hence they are easily inspired to improve themselves and go ahead. Teachers are convenient to modify their teaching based on the information of evaluation system. USA poured 0.35 billion dollars into establishing comprehensive and sophisticated evaluation system for the purpose of locating students' problems and improving teaching quality.

### D. *Offer Technical Support or Technique Training on Software Application*

Training in summer vacation or winter vacation can be provided for teachers to improve themselves in the field of education technology, which make them confident and prepared for a new way of teaching based on information technology. Only teachers are well prepared can they guide students to apply teaching and learning software. For example, office 2013 and Camtasia software used for developing micro-lectures are new to most teachers, who need special training to familiarize and practice them. Some training programs can be set for both teachers and students to learn together, thus facilitate wonderful teacher-student relation. In France teachers are provided 13 necessary digital services by schools since 2013. India sells students portable computers at a good price in order to let students gain access to internet. 150, 000 teachers are trained in internet teaching. Information technology leads to the change of teaching mode even the pattern of university. All these indicate application of information technology in education is indispensable.

### E. *Develop MOOCs, Micro-lecture and Establish Small-scale Corpus*

Teachers are trained to develop MOOCs and micro-lectures, which provide channels for students to study by themselves. Students can strengthen or make up what confuses them in class via MOOCs and micro-lecturers, which is beneficial for learning, teaching and research.

Teachers get knowledge of corpus and employ corpus in teaching. Above all, teachers introduce students how to identify all types of corpus and exploit corpus students and get students familiarize and employ corpus in study, such as word frequency, word collocation. Then students are helped to participate in the building of corpus. A corpus of subjects concerned can be set up to analyze or compare students' homework or a variety of resources, which satisfy students'

unique needs. The self-made corpuses are good resources of review and research.

#### *F. Construct Learning Community and Strengthen Communication between Teachers and Students*

Learning community consists of teachers, students and information technology (Wenger, E, 2002). Students and teachers as main participants, play a leading role.

First, negotiation between teachers and students are necessary. The functions of negotiation are as follows: to cultivate sense of responsibility; to convert learning process into process of liberating students from passive learning; to make students play an active role; to have students participate in the design of learning content; to enrich class learning material; facilitate teachers to explore teaching strategies.

Second, teachers construct learning community based on their interests via QQ communicative platform. The large class can be divided into various learning groups with similar interest. First, a technical platform is indispensable, which is used to manage class members and subject material, or launch a forum or seminar. Besides, learning zone and learning materials are to be designed. Learning content is divided into different zones according to different topics, way of learning and learners. Once learning community is established, learning tasks are to be designed. Tasks should be practical, comprehensive and correlated, thus promote in-depth learning and multidisciplinary learning with the purpose of arousing students' interest and enhance learning motive. Meaningful learning aims to capture students' interest. Practical tasks, characterized by the integration of theory and practice contribute to learning of exploration.

Last, emotion of individuals should be taken into consideration in the management of learning community, which can indicate democracy and concern about human nature. Rule, task design and evaluation involve students' participation.

#### *G. Strengthen Monitoring System*

College English autonomous learning based on network environment does not mean free study without any monitoring, but rather, refers to the self-adjusted, self-planned, self-monitored, self-motivated, and self-regulated English learning with the active assistance and involvement of peers, teachers, the department of teaching administration and network technology, etc. Students may feel at loss or not focused during the process of autonomous learning, thus need the instruction of teachers or some type of monitoring system, which accordingly facilitate or discipline students. College English autonomous learning based on network environment requires an effective monitoring system, which involves many aspects, teacher, head teachers, teaching administrator and internet platform technician. A multi-monitoring system consists of teacher, head teacher, teaching administrator and internet platform technician.

## VI. CONCLUSION

The student is the real subject of study and the core of network learning community. Students can give full play to the initiative under the guidance of teachers, solve problems and construct knowledge via making use of all resources, experience, books, network, teachers, students and other resources.

The students in order to complete comprehensive tasks cooperate and divide tasks by collecting information and ideas, sharing with other students and integrating information finally proposed better solution. In the learning community, learners with different learning backgrounds and various learning levels promote communication and inspire interest to its utmost. In the network learning community, students are the learner of knowledge, the knowledge provider and learning facilitator.

Teaching and learning should go through procedural negotiation, implicit and explicit negotiation included. Negotiation involves learning needs, teaching purpose and content, learning materials and methods; the way of evaluation; learning speed and learning partners. Typical problems can be located by teachers as well as students. Thus problems contribute to decision making and action taking. Evaluation by teachers and students follows accordingly, which is vital for subsequent negotiation.

In a word, promoting learner autonomy contributes to the realization of college English teaching objectives and to the cultivation of learners' life-long learning ability. Autonomy and Monitoring are not concepts of paradox, instead, they rely on each other and coordinate mutually, for proper monitoring on autonomous learning will improve college English teaching quality and learners' achievement.

Further research will go to empirical study in this field with the purpose of testing the effectiveness of autonomous learning based on Web, which will be of benefit to improvement of learning quality and teaching quality.

## APPENDIX

### **Questionnaire for students**

#### **Questionnaire on Autonomous English Learning**

Major \_\_\_\_\_

Age \_\_\_\_\_

Sex \_\_\_\_\_

1. Have you developed the habit of making an English study plan?

Yes No

2. Have you developed the habit of reading English materials online in your spare time ?  
Yes No
  3. Have you developed the habit of previewing the English content you are going to learn via internet?  
Yes No
  4. What is your method of English learning out of class?  
Learn by internet  
Do homework  
Nothing special
  5. Do you learn English with the help of IT (Information Technology) ? If so, what kind of IT do you prefer to ?  
Yes No  
Internet TV Radio Newspaper Others
  6. How long do you spend on English learning online in your spare time every day ?( Hour )  
Less than half an hour  
0.5 to 1  
More than 1
  7. What are the barriers against your autonomous English learning ?  
Patience New words Boring topic Complex sentences  
Limited time Others
  8. Are you good at applying IT to help English learning ?  
Yes No Just so so
- What is your attitude toward autonomous English learning? (You can also show us your autonomous English learning plan)
- What are the difficulties in autonomous English learning?
- What help do you want to obtain from teachers and schools?

#### Question for teacher interview

1. Do you think autonomous learning is beneficial to students?
2. Does autonomous learning evaluation mechanism remains a constraining factor?
3. Do you think what teachers should do to help students concerning autonomous learning?
4. What hinders you in cultivating student autonomous learning ability?
5. What should school contribute to cultivate student autonomous learning ability?
6. What do you think are important in autonomous English learning?

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