

# *Integrated Multi-Dimensional ESP Course Design: One Case Study*

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**Keywords:** ESP, course design, multi-dimensional learning, self-regulated learning

**Abstract:** In recent years, there has been a shift in course design to a more integrated multi-dimensional model in higher education. Such a shift is to argue that learning should be multi-dimensional and that course design should be relatively connected with multiple theories of learning. For a better understanding of such an integrated multi-dimensional course design, the present study employed a case study method to explore one ESP course design, which was underpinned by a multi-dimensional model. The results of the case study are illuminative, showing that the integrated multi-dimensional ESP course design is the potential to enhance students' motivation and self-regulated learning. Consequently, we conclude that the current case study has shed light on integrated multi-dimensional ESP course design for further development at tertiary education.

## 1. Introduction

It is accepted that learning should be multi-dimensional from the perspective of constructivism, namely, learning should occur in a process, in which learning is integrated with various bodies of knowledge. The need for English for Specific Purpose (ESP) courses at the university level is widely acknowledged in English language teaching and learning in the contexts of English as second language (ESL). Since the early 1960's, ESP course design has been one of the prominent areas of English language teaching. Likewise, it is presumed that ESP course design integrating with multiple learning theories should have certain impacts on ESP learners, and in so doing, ESP learners are expected to be led into deep learning. That is to say, multi-dimensional meaningful cognitive learning activities could activate learners into their own learning process, then obtain knowledge, and further develop their potentials and minds. More importantly, multi-dimensional course design is a learning-centred dynamic process and does not move in a linear fashion. The design is to enable the course to respond to developments. Nevertheless, it remains little known of such multi-dimensional ESP course design. Therefore, the present study is to explore multi-dimensional ESP course design and, thus, to research its impacts on ESP learners in terms of motivation, strategies, and self-regulated learning.

## 2. Multi-dimensional Course Design

The multi-dimensional course design is to integrate theme-based teaching and learning, case analysis, and technology-assisted teaching and learning, which are further illustrated as follows.

### 2.1. Theme-Based Teaching and Learning

Theme-based teaching and learning emphasizes that the construction of knowledge requires learners to take their own learning responsibility, and to engage themselves in learning. The roles of teachers are regarded as facilitators. Features are inherent in theme-based teaching and learning as follows (Gao, 1998) [1]:

a). Materials of theme-based teaching and learning is based on ‘themes’ and they can integrate different topics for explorations into a connected conceptualized structure.

b). Theme-based teaching and learning focuses on student-centered learning activities, which are led by active participations, and guided by teachers/instructors.

c). Theme-based teaching and learning starts from key subject-related issues with an aim to develop learners problem-solving ability and multi-intelligences.

d). Theme-based teaching and learning has an aim to develop personalized learning, providing space for self-paced learning.

e). Theme-based teaching and learning is more concerned with educational psychological activities.

f). Themes in theme-based teaching and learning are selected and planned with cares.

g). Theme-based teaching and learning is more concerned with integrated materials, and the integration between various knowledge systems.

Moreover, it is important to notice that topic selections, course design, content knowledge in theme-based teaching and learning need to meet professional criteria. In particular, teaching topics should be relevant to learners in order to activate their discovery and explorations, and thus increase learning motivation and self-regulated learning (Hsu, 1991:11) [2]. If themes are derived from concerned social issues in daily life, learners are expected to learn how to solve problems, and ultimately to develop their capability of problem-solving as well as knowledge.

### 2.2. Case Analysis

Case analysis has been widely used in various professional education, for example, business education, medical education and law education (Carter & Unklesbay, 1989)[3]. Case studies can be used to examine patterns of interactions between participants and environments, and that ‘why’ or ‘how’ questions can be used to elicit knowledge involved in any cases (Yin 1994, 2003)[4,5]. Course design integrating with case analysis is assumed to develop learners’ learning capability and judgment through discussion, responding, listening, and guided thinking (Doyle, 1986; Shulman, 1992; Sudzino & Kilbane, 1992) [6, 7, 8].

### 2.3. Technology-Assisted Teaching and Learning

Nowadays, knowledge is constantly changing and updating (Gillani & Relan, 1997) [9]. Along with the advance of computer technology, technology-assisted teaching and learning has become an indispensable way of learning. Technology-assisted teaching and learning has features of being learner-oriented convenient, user-friendly, accessible and standardized (Saltzberg & Polyson, 1995) [10]. In addition, technology-assisted learning platform can be used to support face-to-face teaching (Zhang, 2006) [11]. In the present study, the MCX learning system was employed in the multi-

dimensional course design as a means of technology-assisted teaching and learning with an aim to enhance students' learning out of classrooms.

### 3. Research Method

Questionnaire survey and empirical research method were employed in the present study. Motivation and Learning Questionnaire (hereafter MLQ) was developed and administered for data collections. There are two main parts in the MLQ; one is 'learning motivation' and the other is 'self-regulated learning'. The questionnaire was in a format of 5-point Likert scale (*strongly disagree - strongly agree*). The questionnaire was administered at the first week and at the last week of the course. In addition, experimental teaching was carried out based on the multi-dimensional ESP course design. The research subjects were seventy-nine students who enrolled in the course. The participants are convenient sampling. After developing the course, one six-month teaching experiment was carried out. The experimental teaching was applied into one course entitled '*Business English & Translation*'. The framework of the multi-dimensional ESP course design was underpinned by knowledge and teaching dimensions. The knowledge dimension was constructed by theme-based teaching and learning, and case method, connecting case method. The teaching dimension consists of classroom-based learning and technology-assisted learning, aiming to sustain learning of the research subjects in-and-out classrooms.

### 4. Results and Discussion

After the teaching experiment, the participants were observed to become more active in their own learning, and to initiate more discussion either in class or on the learning platform. In other words, the multi-dimensional course design seems, to some extent, to have exerted its influence on the subjects' learning. Results of the current study are discussed in three aspects, that is, learner motivation, self-regulated learning and strategies respectively.

#### 4.1. Impacts on Learner Motivation

Table 1: Intrinsic motivation of the participants

Intrinsic Motivation	Pre-Means	Post-Means
1. I like to learn challenging contents in order to learn new things.	4.3	4.4 *
2. For me, being able to improve my skills is important.	4.5	4.5
3. In the course, I like to learn some contents which could invoke my curiosity no matter how difficult they are.	4.3	4.5 *
4. For me, understanding the homework I did well is important.	4.4	4.5 *
5. In the course, the most satisfying thing is to understand the course well.	4.4	4.4
6. One of my goals is to master many new skills.	4.4	4.6*
7. In the course, I will do my homework whenever I can.	4.4	4.4
8. My goal is to learn better and more.	4.4	4.4
9. For me, learning many new concepts is important.	4.4	4.7*

(\* indicates higher mean scores)

Table 1 and Table 2 show the impacts of the multi-dimensional course design on learners' motivation to the course and their intrinsic motivation. Table 1 shows that the participants sustained their high intrinsic learning motivation before-and-after the teaching experiment. That is to say, the multi-dimensional course design has the potential to motivate the participants to work on their own

learning.

As seen in Table 2 below, it is found that the subjects maintained their motivation to the course. Their responses showed that after the teaching experiment they had slightly higher motivation (Pre-Q  $M=4.0$ ; Post-Q  $M=4.1$ ), and preference to course contents and themes (Pre-Q  $M=4.1$ ; Post-Q  $M=4.3$ ). Their agreement to the usefulness of the teaching also slightly raised (Pre-Q  $M=4.2$ ; Post-Q  $M=4.4$ ).

Table 2: Learner motivation towards the multi-dimensional ESP course

<b>Learner Motivation to the Course</b>	Pre-Means	Post-Means
28. I am interested in the course contents.	4.0	4.1 *
29. I think that the contents of the course are useful.	4.1	4.3 *
30. I like the themes in the course.	4.2	4.4*

(\* indicates higher mean scores)

## 4.2. Impacts on Self-regulated Learning

Table 3 shows the impacts of the course design on the subjects' self-regulated learning in relation to self-management and self-monitoring before-and-after the experimental teaching.

Table 3: Self-management of the participants

<b>Self-management</b>	Pre-Means	Post-Means
48. While studying the course, I follow my time schedule.	3.5	4.1*
49. While studying the course, I use the time of learning well.	4.0	4.1*
50. I am sure that I catch up the weekly syllabus of the course.	4.1	4.2*
53. I follow my study schedule eventhough I face difficulty.	3.6	3.8*
54. I attend the class on time.	4.1	4.2*
57. I am al ways able to follow my study plan.	3.8	3.9*

(\* indicates higher mean scores.)

As Table 3 shows, it is found that the subjects appeared, to some degrees, improved self-learning management, for example, time management for studying the course (Pre-Q  $M=3.5$ ; Post-Q  $M=4.1$ ), time management while facing difficulty (Pre-Q  $M= 3.6$ ; Post-Q  $M= 3.8$ ), a good use of time (Pre-Q  $M= 4.0$ ; Post-Q  $M=4.1$ ), and attendance to the class (Pre-Q  $M=4.1$ ; Post-Q  $M= 4.2$ ).

Table 4: Self-monitoring

<b>Self-Monitoring</b>	Pre Means	Post-Means
32. If I use appropriate ways of learning, I can learn the course better.	4.3	4.4*
33. If I cannot learn the course well, it will be my own faults.	3.9	4.2*
34. If I work hard, I can understand the course well.	4.1	4.4*
46. If I do the best, I can complete the most difficult work.	3.9	4.1*

(\* indicates higher mean scores.)

As seen from Table 4, the participants, to some extents, appeared to develop self-monitoring in the course of their learning. They are more likely to better monitor ways of their own learning (Pre-Q  $M=4.3$ ; Post-Q  $M=4.4$ ), to reflect their learning (Pre-Q  $M=3.9$ ; Post-Q  $M=4.2$ ), to make more efforts into their own learning (Pre-Q  $M=4.1$ ; Post-Q  $M=4.4$ ), and to engage more in their own learning (Pre-Q  $M=3.9$ ; Post-Q  $M=4.1$ ).

### 4.3. Impacts on Learning Strategies

Table 5 shows learning strategies of the participants in the current study. As seen from Table 5, the participants appeared to slightly improve their strategies of learning after taking the course. Interestingly, the participants showed that they would ask themselves some questions and they had focused readings after the course finished (Pre-Q  $M=3.5$ ; Post-Q  $M=4.1$ ). As to the previous contents of learning, the participants would increase their understandings through a self-questioning and-answering strategy (Pre-Q  $M=3.7$ ; Post-Q  $M=4.0$ ).

Table 5: Learning strategies of the participants

Learning Strategies to the Course	Pre-Means	Post-Means
60. Before reading, I usually scan it first to understand the organization.	3.8	3.9*
61. While study the course, I usually make a focused reading through asking self some questions.	3.5	4.1*
62. I will change my way of learning when the learning content too difficult to understand.	3.9	4.1*
63. While studying the course content, I will enhance my understandings through asking and answering some questions by myself.	3.7	4.1*
66. Before reading, I will think about a theme carefully, and then decide my direction of learning.	3.7	4.0*
67. I will set up goals to guide my learning.	3.7	3.9*
71. While studying the course, I will set up goals in order to guide my learning activities.	4.0	4.1*
72. When I am confused with some course contents, I will read them again in order to better understand them.	4.1	4.1

(\*indicates higher mean scores)

In addition, the participants appeared that they set their own learning goals to guide their own learning (Pre-Q  $M=3.7$ ; Post-Q  $M=3.9$ ). Therefore, it is more likely that the multi-dimensional course design could have positively enhanced the participants to use their learning strategies.

### 5. Conclusion

The current case study has explored impacts of integrated multi-dimensional ESP course design on learners' motivation, strategies and self-regulated learning. The results of the study have showed that the subjects in the study sustained their learning motivation, and enhanced strategies of learning, and self-regulated learning. In other words, results of the study have, to a greater extent, illuminated positive effectiveness of the multi-dimensional ESP course developed in the current study. In the future, more follow-up studies are in need into researching the multi-dimensional ESP course design for better insights into the course model and its applicability in tertiary education.

### Acknowledgements

The current case study is partially supported by the Jiangsu Social Science Foundation of China (Grant No. 21YYB014), (Grant No. ZZYD003) & (Grant No.2022 SJYB2404). We would like to thank all participants in the case study and kind assistance from colleagues for the study

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