(REVIEW ARTICLE)

Principles of ESP Teaching Activity Design - Taking Industrial Design English as an Example

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Abstract

Contemporary university English instruction typically exhibits issues such as antiquated pedagogical notions and a monolithic teaching approach. Conventional teacher-centered instruction, characterised by a lack of interactivity and an inability to completely engage students' drive to learn, directly results in students' inefficacy in the classroom and suboptimal teaching outcomes, a phenomenon also observed in English for Specific Purposes (ESP) instruction. Crafting effective instructional activities that engage students actively and stimulate their interest can augment both learning efficiency and teaching effectiveness.

Keywords: ESP; Teaching Activity Design; English for Industrial Design; Antiquated pedagogical notions

1. Introduction

The challenge faced by college English teachers in China recently lies in enhancing the approach to College English instruction to meet both general and professional language requirements effectively. Traditional methodologies, primarily lecture-based, lack the necessary interactivity and engagement to support language retention and application in real-world contexts, particularly in specialised fields like Industrial Design. As a result, reforming instructional strategies has become an imperative, necessitating an exploration of teaching models that promote active, student-centered learning. Activity-Based Learning (ABL) is increasingly recognized as a viable solution that encourages hands-on involvement and practical application, elements vital for students preparing to operate in professional environments. This exploration of ABL within the ESP framework may hold significant potential to enhance learning outcomes in specific fields, thereby addressing the limitations of conventional teaching methods.

1.1. Background

Till 2019, there are 2,688 institutes of higher learning in China. College English, as a course, is compulsory in almost all colleges and universities, especially for freshers and sophomores. Although in certain colleges and universities, teachers of College English are trying to introduce novel teaching method or mode, like task-based teaching, flipped classroom, MOOCs, SPOC, etc., traditional lecture-based English teaching still dominate. The fact is that most of the college and university students graduate with quite low English proficiency in China, especially in terms of speaking. Most of the time, students are taught through lecture, sitting in the classroom, listening, note-taking with little practicing. It is believed that this teaching method results in low attendance, absent-mindedness, less motivation and interest in learning. Besides, students' failure to get themselves engaged in learning will definitely lead to unsatisfactory teaching outcome.

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With the policy of Reform and Opening-up in China and deepening of globalization, more Chinese employees both at home and abroad need to communicate with clients, customers and colleagues from other countries, which means that they should not only be proficient in English with respect to daily conversation and communication, but also need to communicate in English in their professional field. English in teaching should be more profession orientated and focus more on practical use. In other words, knowledge of English itself should not be placed at the core of College English teaching but use of English. Under this new circumstance, English for specific purposes started to gain attention from educational adnimisters and instructors. Efficiency of ESP teaching needs greater concern, as a result. According to McGrath and MacEwan(2011), when activity-based learning is adopted, students become "more actively involved in the learning process through acts of 'doing', 'being' and 'critically reflecting' than in traditional, didactic education that is more centred around the passive act of 'knowing'". Thus, Activity-based learning is regarded as a more effective teaching method than traditional lecture-based teaching and grammar and translation teaching method when applied to teaching English for Specific Purposes.

1.2. Activity-Based Learning (ABL)

What constitutes activity-based learning (ABL)? Suydam and Higgins (1977) define it as the learning process wherein the student is actively engaged in performing or seeing an action. In a similar vein, Prince (2004) characterised it as a pedagogical approach in which students participate in the "learning processes." Upon its adoption, children will learn at their own pace through teacher-facilitated activities (Gerngross & Puchta, 1994). Activity-Based Learning (ABL) is intricately connected to problem-based, project-based, and collaborative learning, components of which are integrated into ABL (Fallon et al., 2012). Harfield et al. (2007) asserted that with the adoption of ABL, students transiting from passive listeners to active participants in the learning experience. ABL is said to be founded on "constructivist" learning theory (Hein, 1991; Stößlein 2009), which posits that individuals "construct" their knowledge and learning processes based on prior experiences. Learning activities centred on "real-life experiences" facilitate the transformation of knowledge or information into personal knowledge applicable in various contexts (Edward, 2001). ABL assists learners in developing conceptual frameworks that facilitate advanced performance, including practical problem-solving and the transfer of knowledge and skills (Churchill, 2003). In an ABL classroom, students become active learners who contemplate the demands of learning tasks and devise solutions to problems. They appear to focus on problem-solving rather than acquiring content knowledge. During the problem-solving process, people acquire knowledge of the material (Churchill 2003). A study by Zahoor-ul-Haq et al. (2015) demonstrated that pupils educated in activity-based language classrooms outperformed those instructed via traditional techniques in listening skills on post-tests. In a study by Zahoor-ul-Haq et al. (2017), the experimental group instructed by ABL outperformed the control group taught traditionally on the post-test on speaking achievement.

1.3. ABL in ESP Learning and Teaching

English for Specific Purposes (ESP) is a form of the English language that integrates professional knowledge with linguistic proficiency, tailored to a particular occupation or field of study. English for Specific Purposes (ESP) constitutes an advanced segment of College English, with its pedagogical objectives, curriculum framework, and instructional materials specifically aimed at enhancing students' reading, listening, speaking, writing, and translation competencies within their specialised disciplines. The objective of its instruction is to enhance students' English reading, listening, speaking, writing, and translation skills within their specialised disciplines, so equipping them for professional communication in certain industries post-graduation. The prevalent pedagogical approach in English instruction is the Grammar-Translation technique, sometimes referred to as the Translation Method or conventional technique, which remains the most extensively utilised and influential teaching system to date. The translation teaching style is, however, unsuitable for ESP instruction. ABL, grounded in constructivism and emphasising student participation, aligns with problem-based, project-based, and cooperative learning methods, effectively facilitating active student engagement in the learning process, thereby significantly enhancing the overall learning experience. It may genuinely enable students to 'actively engage in the learning process,' so significantly enhancing their interest in education and improving academic achievements.

2. Literature Review

The integration of technology with Activity-Based Learning opens new perspectives for contemporary education and ESP learning experiences. As stated by Liu et al. (2022), the effectiveness of the Flipped classroom in ESP instruction offers and integrates use of technology to facilitate learning experiences aligned with principles of ABL. This view is particularly appropriate to the present educational scenario, whereby the digital tools put students in contact with more authentic materials and situations which can give them the opportunity to practice the language in context. The quasi-experimental study by Hussain et al. (2011) showed that a peer group activity-based learning was effective in construction of scientific knowledge, development of deep understanding of scientific concepts, and application of this

knowledge in diverse situations. Furthermore, the experiment by Marley et al. (2010) indicates that an activity-based reading strategy enhances memory for target passages and encourages subsequent imagery generation which aids free recall among third graders, although their younger counterparts did not equally benefit from such a strategy. Indeed, Hake (1998) found that compared to traditional methods, mechanics courses significantly performed better when the methods of interactive engagement are exploited. Prince (2004),supports the core components of active learning when he shows that activities introduced into lectures considerably improve the level of information recalled and point out that there is an overwhelming evidence to support the concept of student engagement. Also, in the case of foreign language learning, according to Hussein et al. (2019), pragmatic knowledge can effectively be facilitated with the help of an activity-based teaching methodology in order to help language students by way of interviews, observations, and focused discussions. In addition, the experimental study undertaken by Zahoor-UL-HAQ et al. in 2017, specified the experimental group that was taught with the activity-based learning method performed significantly better as compared to that of the control group during post-test in speaking achievement.

However, Tsai et al. (2019) stated that web-mediated ABL did not improve the learners' computing skills, learning engagement, and academic motivation more than the non-ABL treatments. In Stößlein's (2009) questionnaires' survey, through which the main gain of the students at the end was an enhancement in performing the business calculations more accurately, and improvement in their reading and presentation skills, but not the writing of business letters. In other words, though activity-based learning turns out to be effective in several domains for different levels of learning, its effectiveness must be further researched in different learning areas and technological applications.

3. Principles of Activity Design in ESP Teaching and Learning

The principles of activity design for teaching English in Industrial Design are summarised through the processes of activity design, observation, and reflection.

3.1. ESP Instructional Activities Should Be Engaging and Informative

English language acquisition frequently necessitates extensive memorisation, and the prevalent grammar-translation pedagogical approaches will undoubtedly induce boredom and disinterest in students, so diminishing their drive and initiative in the learning process. ESP instruction frequently necessitates the memorisation of numerous words and specific idioms. Rote learning is indeed possible; nevertheless, it is significantly less effective than engaging instructional activities in enhancing student motivation. Well-structured educational activities can sustain student engagement in learning, and within a conducive learning environment, they can more readily acquire knowledge. English instruction for Industrial Design frequently incorporates design language and specific components of the discipline, necessitating that students engage in drawing activities during the course. Consequently, when assessing students' vocabulary retention, the instructor may employ a technique that involves having pupils listen to words and create corresponding illustrations. Regardless of whether the instructor articulates the words in Chinese or English, the pupils must illustrate a picture as a response. This can enhance the enjoyment of word dictation and enable learners to differentiate between terms with analogous meanings, such as lever handle and knob, both of which are door handles, however their shapes are markedly dissimilar. If the instructor possesses drawing proficiency, he or she may illustrate the image and tell the students to transcribe the accompanying text. It is essential to recognise that drawings should be simplistic, as intricate designs may be time-consuming to execute. Furthermore, the objective of dictation is to assess the learners' proficiency in the newly acquired vocabulary. Excessive focus on sketching detracts from the objective of this educational exercise. To assess pupils' mastery of new vocabulary, the instructor may employ group competitions, such as the word game "bingo." The particular execution of the game encompasses various stages. The instructor must first create a table, with each cell containing a word or phrase in either English or Chinese, depending on the desired proficiency level of the vocabulary. The students organise into multiple groups, which compete in a race to provide the correct answer or take turns defining the meaning of a word or phrase. For each right response regarding the word in the grid, the grid is coloured in the corresponding hue of the group. The first group to achieve five consecutive squares wins the game. This game enables students to collaborate, as group members must cooperate and compete for their respective teams. It not only assessed the students' knowledge retention but also engaged them intellectually, requiring them to create their own groups of grids aligned in a straight line while simultaneously devising strategies to obstruct other groups from achieving the same, so enhancing the activity's competitiveness.

3.2. ESP Teaching Activities Should Focus on Effectiveness

The majority of students are inclined towards engaging and enjoyable activities. Nonetheless, instructional activities must be purposeful and should not solely emphasise enjoyment and amusement, while disregarding their educational functions. Instruction must be effective, meaning it should facilitate student learning. The most effective method to comprehend the utilisation of a term is believed to construct a sentence utilising that word. The first author has

developed a classroom exercise for teaching English in industrial design, wherein students compose a novel by incorporating newly learnt vocabulary to enhance their familiarity with word usage. Background: As the semester concludes, the course instruction has finished and transitioned into the revision phase. Objective: To assist students in recalling and reviewing previously acquired vocabulary and usage, while enhancing their speaking and writing skills. Procedure: Each student received a word card containing previously taught vocabulary. If the pupils do not recall their usage and pronunciation accurately, they must consult the dictionary and review their notes independently. Students were allotted 5 minutes to prepare, after which the teacher randomly selected a student to construct a sentence using the assigned word. The lecturer promptly wrote the sentences on the blackboard or typed and projected them on the screen. Upon the completion of a sentence by the initial student, another student was randomly chosen to advance the narrative by incorporating a sentence utilising the designated word or phrase assigned to him or her. This new-written sentence must correlate with the preceding statement. The remainder was executed similarly, until the final student contributed the concluding sentence to complete the narrative. Alternatively, it may continue until the narrative evolves in an unusual manner, necessitating no additional storylines. Consequently, all the students engaged in the completion of a narrative. Throughout this stage, the instructor should highlight the application of each word and rectify the students' flaws, encompassing grammatical, pronunciation, and usage issues. Reflection: This form of improvisation serves as an assessment of students' proficiency with vocabulary and their spontaneous responses. All students are very focused as they anticipate what will happen next in the story . Occasionally, a student's sentence construction may be accurate, yet the narrative diverges from its intended course. The subsequent student enters to "rescue the situation" and redirect the narrative appropriately. In this case, with the teacher's intentional emphasis on the key points, the students may have a deep impression of the usage of each word, which is considered effective.

3.3. Teaching Activities Should Be Integrated with Students' Majors

The distinction between the instruction of English for Specific Purposes (ESP) and general English lies in the fact that ESP content is pertinent to the students' fields of study. Consequently, the design of ESP instructional activities must be tightly aligned with the students' fields of study. The first author has made several efforts to construct instructional activities tailored to the specialisations of industrial design students and the relevant teaching content, with the following being two instances. (1)'Who's the spy' Background: The instruction of the article labelled 'Gestalt Theory' has been finalised. Objective: To facilitate students' proficiency in the English terminology associated with Gestalt theory, encompassing both meaning and pronunciation, while also revisiting previously acquired vocabulary, such as 'form,' and its application. Description: The majority of students had already participated in the game 'Who's the Spy' before, and this exercise, 'Who's Spy,' is grounded in Gestalt principles. The class comprises 34 pupils, organised into 7 groups with 4 to 5 students each. The instructor prepares seven groups of images in advance, primarily consisting of trademarks. In each set of images, there exists only one image that differs slightly from the rest. The students need to describe the picture in English to find out who has got the distinctive picture, and their descriptions should incorporate terms connected to Gestalt Principles. (2)'Colouring a product' Background: The instruction on intensive reading of the paper regarding colour psychology has been concluded. The students have acquired proficiency in Photoshop and may utilise it proficiently in their professional courses. Objective: To empower students to articulate competently in English the rationale for the product's colouration, including how 'the colour of…' transmits 'the emotion of ......', the appropriate target users for the product, the acceptable room for its placement, and the justifications for these choices. Students should additionally acquire the English terminology for various colours, particularly those that are little utilised. Procedure: Educators developed colour cards in advance corresponding to the number of students, ensuring that each student received a unique colour card featuring the Chinese and English names together with phonetic symbols of the colour.

Uncoloured sketches of certain products were supplied to each group and guarantee that the quantity of products in each group corresponds to the number of group members. Instruct students to paint the products using the colours of the cards they received; if a student's card colour does not correspond with the coloured product, they may exchange it with other students. Participants must provide a concise explanation in small groups, utilising PowerPoint, detailing the colour choices made for each product, the rationale behind these choices, the intended target group, the appropriate room for placement, and the justification for these decisions. Reflection: Students engaged actively and practiced the expression '...... colours' frequently utilised in product design to communicate the '...... feeling'. The term 'colours' was employed to express the feeling of ''. Students acquired knowledge regarding the English names of colours, which is closely aligned with their academic disciplines. This facilitated independent thought regarding colour usage in design, highlighting the varying psychological effects colours have on individuals and their ability to attract distinct target users or potential consumers. Colours are pertinent to the product's application and the environment in which it is intended to be situated. Furthermore, the students applied Photoshop techniques acquired in their specialised classes. Nonetheless, this activity encountered certain issues, primarily regarding its implement. If class time is constrained, students could be instructed to complete the colouring step after class and subsequently present their work as a group in the following session.

3.4. ESP Teaching Activities Should Reflect Real Life

The constructivist perspective on teaching emphasises the importance of creating specific contexts that place students at the centre of the learning process. It highlights the significance of group work and the teacher's role in facilitating and guiding students as they actively construct knowledge. When contexts are grounded in real-life scenarios, students' thinking becomes more realistic and practical. Learning in contexts closely related to students' lives enhances motivation and fosters the development of their comprehensive skills. Richards (1984) asserts that language programs should align with learners' purposes for acquiring a foreign language in real-world contexts, categorising needs into objective and subjective types. The former pertains to societal needs, while the latter relates to student wants. The two types of needs frequently exhibit inconsistency and may differ significantly. Cai (2009) conducted a survey involving 6,625 freshmen across 36 universities in 21 provinces and cities regarding English learning. The results indicated that the English skills most desired by freshmen in university were listening (70.2%) and speaking (86.2%), with English pertinent to their majors or future careers ranking third (52.9%). The first author has endeavoured to create teaching activities for English in Industrial Design that reflect real-life scenarios, including organising a group studio setup for a bidding competition, participating in a group design competition, and marketing design products. These three activities primarily enable students to discuss the advantages of their own work, and overall, they are largely similar. The action of 'selling design items' is the most straightforward, enabling students to work alone and express their individual style; the other two activities are collaborative and prioritise teamwork. This is a concise overview of the design and functionality of the activity 'Selling Design Products.' Background: Students have created a piece of artwork in their professional classes, or they have a strong affinity for a specific artwork. Procedure: Utilising models, objects, or PowerPoint as aids, students present the inspiration for their work, the chosen hue and its rationale, the composition of the piece, its usage and function, and its advantages. The task is straightforward and uncomplicated. Students were really passionate and interested in presenting their own projects or their preferred works. Nonetheless, there remains potential for enhancement in this activity. The product to be promoted need not be created by the students or be among their preferred items; it may simply be a random object from their bags. On a designated day, students will randomly select an item from their bags in the classroom and promote it, or they may promote a piece of stationery placed on the desks of their peers. This exercise aims to enhance the students' adaptability and their capacity to organise their language swiftly. As the children narrate the story, the teacher will assist or rectify any errors, resulting in a greater impact on the students. Simultaneously, once the students have completed their sales, other students may assume the role of prospective consumers and cast their votes on whether to purchase the goods. The teacher may enquire about the reasons, all of which can enhance the involvement of the activity.

3.5. ESP Teaching Activities Should Include Listening, Speaking, Reading, and Writing Skills

In English for Specific Purposes (ESP) instruction, educators typically emphasise the development of listening, reading, writing, and translation skills based on the contexts in which students will utilise English in the future. In teaching English for tourism, educators will emphasise the development of students' speaking skills to address potential need for describing attractions and interacting with tourists in the future. In instructing English for accounting, educators will emphasise the development of students' abilities in maintaining and auditing accounts in English. Nonetheless, other facets of capability are also significant. Language serves as a medium for communication, ultimately. If one does not comprehend, he or she cannot respond. One may be able to read English, yet cannot write in English. In this instance, it may be challenging for him or her to leave notes, respond to emails, engage in online communication, etc. In English instruction for industrial design, the primary objectives is to enable students to comprehend specialised courses, communicate effectively with foreign instructors, and function proficiently in English-speaking professional environments. Consequently, the development of listening, reading, writing, and speaking skills is paramount in the curriculum.

The first author has also considered this issue in the design of teaching activities. Activity design should encompass not just the teaching of speaking and writing abilities but also consider the reading and listening components. In the "Design Competition" exercise, each group received an article regarding a design project and was instructed to utilise the project described in the article as their submission for the competition. The students were instructed to analyse, refine, and analyse the source of inspiration for the work, including its characteristics, materials, applications, inventions, and problem-solving methods, and subsequently organise the language for a simulated competition defence on stage. This task considers the students' reading, writing, and speaking competencies. The "Bidding Meeting" resembles the "Design Competition," although the design is more intricate and comprehensive. The teacher announced that Company A requires specific products and has solicited bids recently. Students collaborate in their groups as a team, and their group is considered the design department of a corporation. Students are also obliged to serve as judges for Company A to determine their preferred design. It necessitates students to seek and refine information. Students function as designers when showcasing their own products and as judges for Company A during the presentations of other groups. The judges must compose a report evaluating the merits and shortcomings of the bidding submissions following the meeting. Thus, it has taken into account the exercise of the students' ability in the four aspects of listening, reading and writing.

Moreover, in instructing English for industrial design, the first author has discovered that appropriate listening materials tailored to the students' proficiency and instructional capacity are exceedingly scarce, and when identified, they must be employed in a "coercive" manner to meet the requirements. This is a concise overview of an educational exercise utilising documentary film production. Context: the freshers have recently commenced their university experience. The majority lack knowledge of the entire design process, yet they exhibit great curiosity. Furthermore, their knowledge of design terminology is minimal. Procedure: Students were encouraged to view the design documentary "Design For Life." This is a design reality television program featuring design prodigy Philippe Starck as the mentor. After the preliminary selection, 12 individuals distinguished themselves and participated in the competition, vying for a single opportunity to join Starck's design firm. Students were instructed to watch it attentively. At the conclusion of each competition round, students were requested to vote for the contestants they believed would remain. The lecturer interacted with the students in this way, so enhancing their participation. During the viewing process, they must select their preferred artwork or designer, examine it or the individual meticulously, and be ready to respond to the teacher's questions as follows:

- Who is favourite designer? Which is your favorite piece of design work? Why?
- What did you learn throughout the documentary?
- What impressed you the most throughout the documentary?

Ultimately, students engage in one-on-one discussions with the teacher, responding to questions while the teacher attentively listens, interacts with the students, and correct their errors.

Reflection: This practice emphasises students' listening and speaking abilities, and the individual interaction with the teacher following the documentary viewing is crucial for rectifying students' errors and facilitating their learning. The one-on-one interaction provides a good opportunity for introverted students, who typically remain silent in class, to articulate their thoughts. Nonetheless, the drawback is that it is time-intensive. The video is lengthy, and the individual discussions with students are similarly time-intensive. In a big class, the teacher can ask questions to spot-check whether the students are attentive and engaged in critical thinking

4. Conclusion

Through observation and practice in ESP instruction, the authors have delineated the principles that should guide the design of ESP teaching activities. These principles stipulate that ESP educational activities must be engaging, prioritise efficacy, align with students' majors, reflect real-life contexts, and encompass listening, speaking, reading, and writing skills. The referenced pertinent situations of activity implementation aim to assist individuals dedicated to ESP instruction and activity design. It is hoped that these would assist individuals dedicated to ESP instruction and activity development.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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