프로젝트 기반 학습의 영자 신문 발간을 통한 과학 영재 학생의 영어 의사소통능력 향상

Developing English Communicative Ability for Science Gifted Students through Project-based Learning of Publishing English Newspapers

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요약

본 연구는 영자 신문 발간 활동이 영어 의사소통 능력 향상에 미치는 긍정적인 영향을 확인하며 프로젝트 기반의 출판 과정을 통한 독립적이면서도 협동적인 학습 환경의 구현가능성을 탐색한다. 한국과학영재학교의 첫 번째 영자 신문 발간 기획은 프로젝트 기반의 교수학습 방법을 적용한 일련의 단계를 거쳐서 완성되었다. 영어 능력과 참여도에 따른 학생 편집자 선발 과정을 시작으로 분야와 주제 및 제재를 선택하고 역할과 기사를 배분하며 결과물을 통합·편집하는 과정을 거친다. 전 과정에 걸쳐 참여자들은 최소한의 지도·감독 아래서 독립적이면서도 협력적으로 활동에 참여하였다. 사후 설문조사에 따르면 성공적인 영자신문의 발간이 전반적 영어 능력을 향상 시켰을 뿐만 아니라 긍정적인 학습자 자아인식과 주도적인 학습 태도를 키웠다고 나타났다. 본 연구는 언어 교육 뿐 아니라 통합적인 프로젝트 기반 교수 학습에 있어 신문·잡지 등의 출판 활동이 주는 장점을 논하는 한편, 향후 프로젝트 교수 학습 방법과 영어 의사소통능력 향상과 관련된 보다 심화된 연구가능성을 제시한다.

■ 중심어 : |영어의사소통능력 | 협동적 통합적 언어 교육 | 프로젝트 기반의 교수학습 | 과학 영재 교육 | 비판적 창의적 사고 | 영자신문 발간 |

Abstract

This study aims to assure the positive influence of publishing English newspapers on improving English communicative ability and explores possibilities of enforcing an explicitly collaborative and independent learning atmosphere through a cooperative project-based publishing process. The project of publishing first KSA English newspapers has completed with a series of processes adopted from project-based learning and teaching strategies. The project involves the initiative process of selecting student editors based on their English abilities and commitment levels followed by planning subjects, themes and materials, distributing tasks and articles, and integrating and editing the outcome. Throughout the whole process volunteers participated independently and collaboratively with minimum supervision. The survey shows that the successfully published English Newspaper resulted in facilitating volunteers' positive self awareness and independent learning attitude as well as improving general English ability. The study discusses possibilities and advantages of publishing newspapers and magazines not for limited language education only, but for integrated project-based learning and teaching with suggestions for further related studies.

■ keyword : |English Communicative Ability | Collaborative and Integrated Language Education | Project-based Teaching and Learning | Science Gifted Education | Critical and Creative Thinking | English Newspaper Publication |

1. INTRODUCTION

Project-based language learning is popularly implemented to provide opportunities for students to engage with language authentically. It supports the idea that hands-on projects help develop integrated learning and activate knowledge into practical applications. In particular, the Korean learners in the context of an extremely mono lingual culture can benefit from the actual usage of the target language. The science-gifted students for this research who show the aptitude for independent and creative learning have a great need for writing ability for academic purposes. At a practical level, publishing an English newspaper had been recently required as a key part of global PR for Korea Science Academy of KAIST (Korea Advanced Institute for Science and Technology).

2. LITERATURE REVIEW

2.1 Competence and Performance

Communicative competence is the ability not only to apply the grammatical rules of a language in order to form grammatically correct sentences but also to know when and where to use these sentences and to whom (Dictionary of language teaching and Applied Linguistics)[1]. Munby (1978) states that communicative competence includes the ability to use linguistic forms to perform communicative acts and to understand the communicative functions of sentences and their relationships to other sentences[2]. Personal competence deals with the cognitive side of language learning. The emotions which accompany the experience have a profound effect on language study. As an educator, not merely a language teacher, to make an environment to build up learner' positive emotions is not beyond the bounds.

2.2 Learning and Acquisition

Learning begins with a selection of some clearly defined elements which is to be learned. In teaching, teachers first present the new items and then have students practice them. In this kind of teaching and learning, the very act of selecting an item pulls it out of the context of normal communicative exchange. In acquisition, there is no special presentation of a new item, no organised drilling. Conversation is about things in the full context of some kind of real human communication. There are, however, significant advantages to acquisition as compared with learning. What has been learned may be forgotten, while what has been acquired is relatively permanent. Learning works only for limited items such as monitoring, correcting or translating whereas acquisition serves directly as the basis for production of speech of writing.

2.3 Communicative Language Teaching

2.3.1 Indirect and Direct Approaches

Indirect approach: teaching conversation interactive tasks

The justification for a task-based approach comes from second language acquisition research. It is argued that learners acquire language through conversation. In using conversation to interact with others, learners gradually acquire the competence that underlies the ability to use language. Conversational competence is seen as the product of engaging learners in conversational interaction such as role plays and problem-solving tasks. The spoken language courses should, therefore, primarily provide learners with opportunities to engage in natural interaction through the use of communicative tasks and activities.

Direct approaches: teaching strategies

Direct approaches involve planning a programme around the specific microskills, strategies and processes for fluent conversation. They aim at fostering the students' awareness of conversational rules and strategies as well as increasing their sensitivity to the underlying processes. Direct approaches also involve providing the learners with specific language input, such as fixed expressions or conversational routines.

2.3.2 Top-down and Bottom-up Processing Strategies

Nunan (1992) notes: Bottom-up processing strategies focus learners on the individual components of messages, that is, the phonemes, graphemes, individual words and grammatical elements[3]. Top down processing strategies, on the other hand, focus learners on macro-features of messages such as the speaker's or writer's purpose, the topic and the overall structure.

Richards (1990:51) explains bottom-up and top-down processing strategies in comprehending spoken messages[4]. The focus in the language classroom was mainly on the development of bottom-up processing strategies. In recent years, however, the need for a balance between both types of strategies has been emphasized.

2.4 Project-based/Task-based Language Teaching

The basic rationale for project/task-based language teaching derives from second language acquisition research findings on language learning, particularly comparing tutored and naturalistic learning. Long and Crookes (1992) adopt tasks as the unit of analysis, support a focus on form and aim to help students systematize and extend their knowledge of particular grammatical or lexical features[5]. They argue a focus on form can promote explicit knowledge. The tasks, however, involve consciousness-raising about properties of the target language rather than the practice of discrete language items.

2.4.1 Aspects of Projects/ Tasks

Willis (1996) states that tasks provide opportunities for free and meaningful use of the target language and fulfil one of the key conditions of learning[6]. Nunan (1989:10) defines the communicative task as: a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form[7]. The definitions of tasks all imply that tasks involve communicative language use in which the user's attention is focused on meaning rather than linguistic structure.

2.4.2 Types of tasks

Tasks are analysed or categorized according to their goals, input data, activities, settings and roles. Long (1996) distinguishes between real world and pedagogic tasks[8]. It is the pedagogic tasks that teachers and students actually work on in the classroom. In the Bangalore Project, three principal task types are used: information-gap, reasoning-gap and opinion-gap tasks, preferring the first[9]. Nunan (1989) suggests one-way and two-way tasks[7]. A two-way task is one in which each participant has some knowledge not shared by any other participant, involving more interaction and negotiation. Willis (1996) distinguishes between closed and open tasks[6]. Closed tasks are ones that are highly structured and have very specific goals, while open tasks are ones that are more loosely structured, with

a less specific goal. She also categorized six types of tasks: listing, ordering and sorting, comparing, problem solving, sharing personal experiences and creative tasks.

3. OVERVIEW

The newspaper project has been intended to achieve the following aims:

1) to develop English communicative ability focused on writing skills
2) to enhance creative and critical thinking through independent learning for science gifted students
3) to cultivate a cooperative and active learning environment through team work
4) to produce English newspapers to showcase the school's emphasis on English education

STAGE 1
Initiative planning and recruiting the crew of English Newspaper Publishing Club

⬇

STAGE 2
Cooperative discussing and selecting themes and materials and assigning duties

⬇

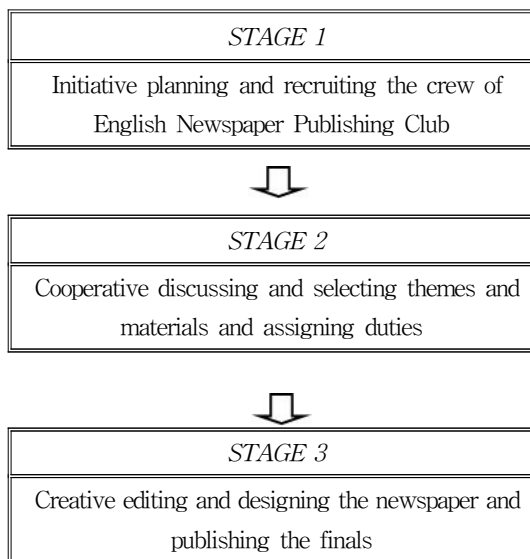| STAGE 3 |
| --- |
| Creative editing and designing the newspaper and publishing the finals |

그림 1. Process of publishing newspaper

The project was initiated by a highly motivated and capable student with an advanced level of English proficiency. The recruiting for the members of English Newspaper Publishing Club was successfully conducted based on their enthusiasm and English abilities, resulting in two freshmen, five 11th graders and three seniors. After the process of planning the subjects and materials involved with many board meetings and heated discussion, the assignment of responsibilities for the first issue of English Newspaper named KSA TIMES was made for every member.
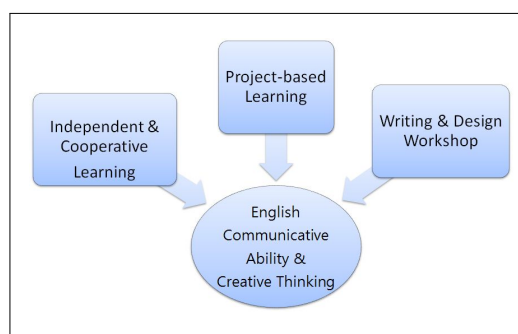

그림 2. Dynamics of Promoting Target Goals

4. PROCESS

The club members gathered their drafts and conducted numerous stages of editing including the correctness and appropriateness of English and the esthetic characteristics and effectiveness of the design of the newsletter. The whole process continued in the form of the round-tour method to maximize members' involvement and collaboration. During the time consuming discussions and debates the whole members were able to exchange their opinions and specialties which resulted in communicative environments without intention
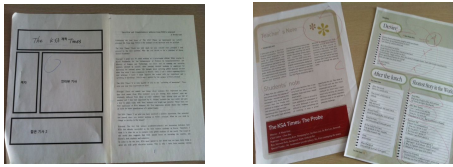
그림 3. 1st Drafts of *The KSAT imes*

그림 4. 1st Drafts Edited

그림 5. 2nd Drafts of *The KSA Times*

그림 6. 2nd Drafts Edited

5. OUTCOME

Enthusiastic and competent members and optimal faculty guidance ensured high quality processes and products. The first volume of The KSA Times was issued after a process of three months and distributed to more than a hundred nation wide academic institutes followed by positive feedback from within KSA and outside. The second volume is in the process of planning and will be issued at the end of the year. The final products as the form of English newspaper demonstrate that students applied the knowledge and skills and they mastered the standards and objectives of the project. Raising the awareness and interest in using English abilities in real life among other students and faculty members was an unintended valuable outcome with this project.

표 1. Content of 1st volume of English newspaper, *The KSA Times*

THEME	PAGE	CONTENT & MATERIALS
Cover story	1	Contents, Interview with Principal
School life	2–3	School Festival: Science Academic Festival
Research	4–5	Marine Life in Changjogwan, R&E Program of KSA
School Event	6–7	Inauguration of Principal, KNN Marathon, Special Lectures, Drama Performance
Science	8–9	Physics: the Higgs boson, 3D Printers, Transcending Light
	10–11	Biology: Plants Under Glowing Lights, Cholera
Literature	12–13	Writing Contest Winners: Poems, Short Story, Shortest Story in the World
Entertainment	14	Movie Review: Iron Man 3
Environment	15	Mushrooms, the New Solution to Plastics
Epilogue	16	Editors' postscript

표 2. Content of 2nd volume of English newspaper, *The KSA Times*

THEME	PAGE	CONTENT & MATERIALS
Cover story	1	Contents, Interview with Dr. Jaiwon Shin
Main event	2–3	School Festival: Science Adventure Celebration
School Life	4–6	KSASF(Korea Science Academy Science Festival)–International
Special Event	7–10	KSA 10thAnniversary, KSA–KMLASportsDay
Special Activity	11–13	Kyeung–cheon Project
Club Visit	14–17	KSA Softball Players, Talent Donation
Interview	18–19	3 Idionts President/ Dr. Cho from KARI, TOE
Science	20–21	Controversies of Science:DNA
	22–23	Sveriges Riksbank Prize
Literature	24–26	Writing Contest Winners: Poems, Short Story, Haiku
Entertainment	27	Movie Review: Gravity
Epilogue	28	Editors' postscript

표 3. Content of 1st volume of English newspaper, *Mind Matters*

THEME	TOPIC	PAGE
Science News	Mushrooms, the new solution to plastics	1-2
	Plants under glowing lights	3-4
	Mining for Jackpot	5-6
	Scientists are conCERNed	6-7
Science Revealed	Order from disorder	9-10
	The history and chemistry of sugar	11-12
	The flying teabag	13
	The drop on your nose	14-15
	Near the speed of light	16-17
Science Revisited	Complexity science: is it physics?	18-20
	Human genome project	21-22
	Art of sorting	23-24
	Exploring the abstract world	25-27
	Cell apoptosis: the program death of cells	28
	What is biomimetics?	29-30
Editorials	Modern physics and the nature of truth	31-33
	Transcending light	34
	Step towards integration	35

6. SURVEY RESULTS AND DISCUSSION

The questionnaire results at the end of the project show that the newspaper publishing project helped enhance English communicative ability for both writing and speaking and raise awareness of the importance of cooperative learning. Overall, students were highly satisfied with the process and results of the project and responded with highly positive feedback on the effectiveness of the project-based language learning. All students strongly agreed that hands-on projects like publishing a newspaper provided a chance to activate the knowledge and adapt language learning skills in real life practical situations. As Kim (2011) researched on the positive implementation of using newspaper in education for reading, the project does not limit the benefits of the project to only composition skills[10]. This project-based language learning facilitated flexible and creative thinking, increased concentration and motivation, and promoted a fun and enjoyable environment which made learning stay in the long term memory.

7. CONCLUSION

This study shows the positive influence of publishing English newspapers on improving English communicative ability and explores other possibilities of enforcing explicitly collaborative and independent learning through a cooperative project-based publishing process. The project involved the process of selecting volunteers, planning the subjects, themes and materials, distributing tasks and articles that implements project-based learning and teaching strategies. The survey concludes that the project facilitated volunteers' independent and collaborative learning as well as general English ability, particularly composition and discussion skills. Therefore the study indicates the advantages of extensive use of hand-on templates of publishing newspapers and magazines not only for limited language education but for integrated project-based learning and teaching.

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