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CONTEXT-SPECIFIC MATERIALS DEVELOPMENT UTILIZING LLMS

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ABSTRACT

The increasing usage of Artificial Intelligence (AI) tools, notably Large Language Models (LLMs) such as ChatGPT, is introducing new potential in education, especially within materials development and differentiated instruction. This paper presents a case study exploring the application of ChatGPT in designing instructional materials for government employees in South Korea preparing for academic study abroad. The study focuses on how ChatGPT was utilized to create customized content that catered to the diverse linguistic, academic, and cultural needs of the participants. The paper begins by contextualizing materials development and differentiated instruction before examining the integration of AI tools, addressing the associated challenges and potential benefits. The case study illustrates how ChatGPT generated content for practicing language registers and exploring various academic disciplines, such as public policy, business administration, and finance. Additionally, it examines the adaptation of AI-generated materials to reflect the linguistic and cultural nuances of the participants' future study locations. This paper highlights the use and potential of AI tools for developing materials for very specific contexts and groups of students.

KEYWORDS: AI tools, TESOL, ChatGPT, LLMs, Materials Development

1. INTRODUCTION

AI tools, particularly Large Language Models (LLMs) such as ChatGPT, are becoming increasingly prominent in differentiated instruction and materials development within educational settings. These advanced systems can produce customized educational content that meets varied learning needs. This paper explores the use of ChatGPT in a case study involving government employees in South Korea preparing for academic study abroad. It focuses on how ChatGPT facilitated the creation of instructional materials tailored to practicing and learning about different language registers, academic disciplines, and cultural contexts.

The paper begins with an overview of materials development and differentiated instruction before narrowing in on the integration of AI tools in this field, highlighting associated challenges. It details a case study where ChatGPT was employed to generate content for practicing formal and informal English and content relevant to various academic subjects, such as public policy, business administration, and finance. The analysis also covers how AI-generated materials were adapted to

reflect the linguistic and cultural nuances of the participants' future study locations. Examples of various AI-generated texts and dialogues are included with some discussion of the contents.

By illustrating these specific applications, the paper aims to demonstrate the practical benefits and limitations of using ChatGPT for creating targeted educational resources. It is important to note that this study does not address all the materials, lessons, and activities from the course, particularly those not generated by LLMs. While it briefly touches on how the materials were used and lesson planning related to the integration of AI-generated materials, the focus of this paper is primarily on the creation of the materials.

The findings offer insights into how AI-driven tools can enhance differentiated instruction and improve the relevance of educational materials across diverse contexts.

2. MATERIALS DEVELOPMENT

Tomlinson (2011) defines materials development as the process of creating and organizing educational resources that facilitate language learning. According to Tomlinson, materials development involves not only the design and production of materials but also their evaluation and adaptation to ensure they meet the needs of learners. Tomlinson emphasizes that materials development should be a dynamic and responsive process, taking into account the specific needs, contexts, and goals of the learners. This approach highlights the importance of aligning materials with the needs of learners and the goals of the educational program, ensuring that materials are not only theoretically sound but also practically effective.

Richards (2017) underscores that materials adaptation is crucial for making educational resources relevant to the specific context in which they are used. This involves modifying materials to better fit the needs of the learners, their cultural backgrounds, and the educational setting. Effective adaptation ensures that materials align with the learners' language proficiency levels and their specific learning goals.

One aspect of adaptation that is relevant to this paper is differentiation. Tomlinson and McTighe (2006) describe differentiated instruction as a teaching approach that proactively addresses the diverse needs, readiness levels, interests, and learning profiles of students within a classroom. According to Tomlinson, differentiated instruction involves tailoring content, process, product, and learning environment to meet individual student needs. It is emphasized that differentiation is not a single strategy but a philosophy of teaching that requires ongoing assessment and flexible processes to ensure all students can engage with the curriculum and achieve academic growth. Tomlinson and McTighe (2006) advocate for the use of varied instructional strategies, such as tiered assignments, flexible grouping, and ongoing formative assessments, to provide multiple pathways to learning and support the diverse learners found in a classroom. Although differentiated instruction goes beyond materials selection and design, it is relevant to the case study in this paper.

A recent technological advancement gaining traction in materials development and differentiated instruction is the utilization of Artificial Intelligence (AI). Tools such as Large Language Models (LLMs) can generate tailored educational content and resources, adapting to diverse learning needs and styles. This topic is explored in greater detail in the subsequent section.

3. REVIEW OF LARGE LANGUAGE MODELS (LLMs) IN EDUCATION

Large Language Models (LLMs) are artificial intelligence systems designed to understand and generate human-like text based on vast amounts of text data. LLMs use Natural Language Processing (NLP) to understand and interact with the human language. NLP is used for various now common technologies such as chatbots, machine translation, and speech recognition, for example generating subtitles. LLMs are a specific type of AI model trained on extensive datasets of text from books, articles, websites, and other written sources. They use deep learning techniques to process and generate text. They predict the next word in a sentence or complete a text based on patterns and knowledge learned during training.

ChatGPT is a specific type of LLM developed by OpenAI. GPT stands for Generative Pretrained Transformer, emphasizing its design to generate text based on input prompts. GPT models are a series of LLMs, with each iteration (e.g., GPT-2, GPT-3, GPT-4) being larger and more capable than the previous one. The development of ChatGPT was enabled by significant advancements in training large-scale language models, allowing AI researchers to build models based on billions of words of text. These large-scale models became feasible due to improvements in computing power and the availability of vast publicly accessible text data, largely thanks to the Internet (Sarrion, 2023). It is much larger than other language models and incorporates advanced deep machine learning, leading to powerful capabilities, ease of use, and responses that closely resemble human conversation (Elbanna & Armstrong, 2023).

There are many potential benefits and challenges in the use of implementation of this new technology in education. LLMs like ChatGPT can be a valuable tool for students by generating content, providing feedback, and creating educational materials like summaries, flashcards, and quizzes. This technology could enhance personalized learning and has been welcomed in the education sector for its potential to support research, automate testing, and create interactive learning experiences. Hong (2023) likens this to the shift during the COVID-19 pandemic, where the transition to online classes sparked a renewed interest in blended learning and the adoption of Massive Open Online Courses (MOOCs). This new focus means that educational institutions are beginning to actively manage its use through plagiarism detection and strict guidelines (Javaid et al., 2023).

Many educators and researchers have looked into the positive benefits of utilizing AI tools for various purposes. Li et al. (2024) explores the use of ChatGPT for implementing differentiated instruction, including the grading of student work, generating course content at different levels, distinguishing task

types, and developing diverse assessments. They suggest that teachers must assess the quality and relevance of materials and tasks generated by ChatGPT, balancing the diverse needs of students while utilizing ChatGPT to save time and support differentiated instruction.

Wadden et al. (2024) utilized AI tools to develop tailored reading and listening materials for their semi-intensive English program. The authors discuss their journey in identifying content gaps in their CLIL curriculum and crafting effective prompts to generate diverse learning resources suitable for various student proficiency levels. While they highlight the potential of AI-generated content in fields like Economics and Health, they also address important challenges, such as adherence to instructions and the risk of plagiarism.

Kim and Park (2023) examine young Korean EFL students' perceptions of ChatGPT-generated scripts versus textbook scripts used in reader's theater performances. They found no significant difference in text flow between the two types of scripts. However, students generally found ChatGPT scripts more engaging, though they preferred textbook scripts when ChatGPT's language was too challenging. This study highlights that while ChatGPT can make learning more stimulating, it may struggle with appropriate language proficiency, necessitating teacher oversight to fine-tune AI-generated content.

Ho (2024) talks about how students have a positive attitude towards using ChatGPT, particularly valuing it as a translation tool and for improving reading comprehension in their specialized fields. Kostka and Toncelli (2023) argue that although AI can enhance and innovate educational practices, it cannot replace the essential social and communicative aspects of language learning. Therefore, educators should focus on leveraging AI to enrich, rather than replace, human-centered learning experiences.

Despite the disruptions to education, many view the integration of this new tool as an opportunity with significant pitfalls. Pack and Maloney (2024) discuss critical issues of using generative AI tools in the classroom like teaching ethics, ownership of work, writing skills development, accuracy of AI outputs, educational equity, and bias in AI. Rasul et al. (2023) emphasize the need for careful use of ChatGPT in academic settings by both educators and students to maintain ethical standards, reliability, and effectiveness. They advocate for several key actions: enhancing education on ethical ChatGPT usage, creating innovative assessment methods, tackling biases and inaccuracies, and incorporating AI literacy into the skill set required for graduates. Furthermore, Isemonger (2023) suggests that the role of teachers is expected to evolve toward helping students navigate and utilize these systems effectively rather than being displaced.

Amidst the backdrop of educational disruption and the emerging potential of advanced AI technologies, I have developed an interest in exploring the applications of Large Language Models (LLMs), such as ChatGPT, as well as AI-driven image generation technologies within the diverse institutions and courses that I instruct. One area where these AI tools could provide significant support

is in creating instructional materials customized to the specific needs and interests of a particular group of students. Utilizing such technologies might enhance the creation process and refinement of educational resources.

3.1 MATERIALS DEVELOPMENT VS. MATERIALS GENERATION

The advent of large language models (LLMs) and artificial intelligence (AI) has introduced new possibilities for TESOL materials development, offering innovative tools and resources for educators. LLMs, such as ChatGPT, can generate a wide range of language practice materials, including dialogues, exercises, and reading passages tailored to specific learning objectives. This capability allows educators to create customized content rapidly, addressing individual learner needs and adapting content to various proficiency levels. For example, LLMs can generate context-specific dialogues for business English, academic discussions, or everyday conversational practice, thus providing targeted and relevant practice opportunities.

The primary distinction between traditional TESOL materials development and generating materials using Large Language Models (LLMs) like ChatGPT lies in the process, adaptability, and personalization of content creation. Traditional TESOL materials development typically involves a structured, manual process wherein educators or materials designers create resources based on established pedagogical frameworks and predefined learning objectives. This process often requires significant time and expertise to ensure that the materials are pedagogically sound, culturally relevant, and appropriately scaffolded for language learners. The materials produced through this approach are generally static, with limited flexibility to adapt to the diverse and evolving needs of different learners.

In contrast, generating materials with LLMs like ChatGPT introduces a dynamic and responsive approach to content creation. LLMs can produce customized learning materials instantaneously by drawing on vast datasets and adapting content to specific contexts, learner profiles, and instructional goals. This capability allows for the rapid creation of materials that are tailored to individual learners' needs, incorporating real-time language use and cultural references. Moreover, LLMs can generate a wide range of content styles, from formal academic texts to casual conversational dialogues, making them versatile tools for addressing diverse language learning scenarios.

However, while LLM-generated materials offer significant advantages in terms of speed and personalization, they also present challenges related to accuracy, pedagogical consistency, and cultural sensitivity. Unlike traditional materials, which undergo rigorous review and refinement, content generated by LLMs may require careful vetting to ensure it meets educational standards and appropriately aligns with learners' needs.

In summary, traditional TESOL materials development is characterized by a deliberate, expert-driven process with a focus on pedagogical soundness, while LLM-generated materials offer a more flexible and responsive approach, with the potential for greater personalization but requiring careful oversight

to maintain quality and relevance. This adaptability proved beneficial in a recent unconventional course I taught, which is detailed below.

4. CONTEXT OF THE CASE STUDY COURSE

The course discussed in this paper was a four-week intensive English program designed for twelve employees of a Korean government department, aimed at preparing them for both daily life and academic culture in English-speaking countries such as Australia and Canada. The participants were scheduled to relocate to these destinations within a few months of completing the program, often accompanied by their families, to undertake studies at various universities for several years before returning to South Korea to resume their roles in government positions.

The initiative for this program was requested and financed by a Korean government department, and it was delivered by a language institute affiliated with a Korean university. A team of ten educators was assembled from different departments of the university to provide instruction. The curriculum encompassed a range of courses including Presentation Skills, Group Debate, Academic Culture, One-on-One Communication Training, Strategies for Listening, Reading, and Writing, and Speaking for Effective Communicators. Approximately fifty percent of the courses were conducted with all sixteen participants together in a single class, while the remaining fifty percent of the lessons divided the participants into two groups of six participants each. Two instructors, including myself, were appointed to teach the Speaking for Effective Communicators course, which was divided into two smaller classes, resulting in my instruction of six participants in one class.

4.1 A TENTATIVE SYLLABUS

The course titled *Speaking for Effective Communicators* was designed with a focus on both specialized and general oral communication skills. While there was some overlap with English for Academic Purposes (EAP), particularly in areas such as presentations and academic culture, this course aimed to address specific oral communication needs for academic contexts while also covering general everyday speaking skills and interactions needed for living in an English-speaking country.

As is often the case, the syllabus for the *Speaking for Effective Communicators* class was prepared before meeting the students and assessing their specific levels and needs. This preliminary course planning meant that the syllabus served as an initial framework, subject to revision as the course progressed. Before the course commenced, some general information was provided regarding the students' professional backgrounds, academic interests, and the English-speaking locations to which they would soon relocate. Utilizing this information, a provisional syllabus was created with the intention of refining and adapting it based on feedback and input from the participants as the course unfolded.

Here is the preliminary syllabus:

Course Description:

This course is designed to enhance spoken communication skills specifically tailored for Korean adults preparing to embark on graduate studies abroad with their families. Through interactive lectures, group discussions, and practical exercises, participants will develop the confidence and proficiency needed to effectively express themselves in academic and everyday contexts in an English-speaking environment. Emphasis will be placed on improving pronunciation, fluency, vocabulary, and cultural awareness to facilitate successful communication both inside and outside the classroom.

Course Objectives:

- Develop the ability to articulate ideas clearly and confidently in English.
- Improve pronunciation and intonation for enhanced clarity and comprehension.
- Expand vocabulary related to academic and everyday topics.
- Enhance fluency and spontaneity in spoken English.
- Cultivate awareness of cultural nuances and communication norms in English-speaking academic environments.
- Practice effective listening skills to better engage in conversations and discussions.

Day 1

- Introducing yourself
- Weekend plans

Day 2

- Ordering coffee
- At the restaurant

Day 3

- Family photos
- Responding to information

Day 4

- Meeting a new classmate
- Making small talk

Day 5

- Subject-specific topics
- Public policy, finance, statistics, business dialogues

Day 6

- Social niceties
- Public policy, finance, statistics, business dialogues

Day 7

- Subject-specific questions and answers
- Casual speaking expressions

Day 8

- Food at our destinations (Los Angeles, Manchester, Michigan, etc.)
 - Drink at our destinations (Los Angeles, Manchester, Michigan, etc.)
- Day 9
- Money and shopping
 - Talking about money dialogs
- Day 10
- Driving abroad
 - Asking for directions
- Day 11
- Formal language for the classroom
 - Debates, agreeing and disagreeing
- Day 12
- Formal language for the classroom
 - Team discussions about public policy, finance, statistics, business

Due to the preliminary nature of the syllabus, which was developed without having a clear idea of the students and their needs, I spent the first week of classes asking the students about their interests, needs, areas of study, and language concerns about living and studying in a foreign country. This is described in the following section.

4.1.2 SYLLABUS INPUT FROM COURSE PARTICIPANTS

During the first week of classes, participants were invited to contribute their input on the topics, scenarios, and contexts they wished to practice throughout the program. Time was allocated in several classes during the first week for participants to brainstorm in groups and then individually list their suggestions for the course. The feedback revealed a broad interest in practicing English across a variety of informal and formal situations, reflecting the diverse needs and objectives of the participants.

The suggestions encompassed informal contexts such as meeting new people, using slang, engaging in small talk, visiting a doctor, navigating road signs, ordering food, shopping, and discussing projects with university peers. The formal contexts mentioned included interactions with professors, conducting interviews, delivering presentations, asking questions in academic settings, and responding to invitations. Additionally, participants requested practice with functional language skills, including polite agreement and disagreement, declining offers, apologizing, and negotiating.

Participants also shared that they represented various government departments and would be pursuing distinct academic disciplines. Specifically, two participants were going on to study MBA (Master of Business Administration) programs, two for Public Administration and Policy, one for Statistics, and one for Finance and Accounting. Despite the differences in their fields of study, some overlap in content was anticipated. These academic areas will be referred to as "target subjects" in this discussion,

paralleling the term "target language" used in conventional English ESL/EFL classes to denote the language focus of instruction.

Given that the participant's interests and needs extended beyond my areas of expertise, subsequent brainstorming sessions were conducted to explore topics related to their target subjects. Suggestions included areas such as economics, budgeting, investment, accounting, statistical analysis, portfolio management, strategic planning, and leadership. This feedback was instrumental in preparing materials relevant to their specific academic pursuits.

Finally, participants indicated that they would be relocating to various destinations, which will be referred to as "target locations," akin to how their academic fields are described in this paper as target subjects. The future study locations included Bath and Manchester in the UK, and Florida, California, Michigan, and Colorado in the USA. Consequently, many initial suggestions related to informal interactions, such as small talk and cultural nuances, required customization to align with these specific cultural and regional contexts. Notably, linguistic variations between the UK and the USA, including slang and conversational practices, necessitated careful consideration to effectively address these regional differences.

The course participants exhibited a diverse range of needs, interests, target locations, and academic subjects, each with unique requirements and goals. A notable aspect of their preparation was that many of these participants were scheduled to relocate to these target locations shortly after the completion of the course and commence their studies in their chosen academic disciplines. This impending transition created a significant impetus for the participants to practice and refine their language skills, particularly in the type of contexts they might experience in their future environments and fields of study.

Furthermore, it was evident that many participants already possessed considerable expertise in the sectors related to their intended academic pursuits. Their backgrounds included substantial professional and educational experiences in these areas, providing them with a foundation of subject-specific knowledge. However, despite their advanced understanding of these fields, the challenge remained to allow them to bridge their existing knowledge to the specific language practice scenarios needed for their forthcoming academic and professional endeavors.

5. MATERIALS GENERATION UTILIZING CHATGPT

Given the specialized nature of the participants' target subjects, which were outside my subject expertise, I encountered a unique challenge that required extensive subject-specific knowledge and terminology. To bridge this gap and provide relevant language practice materials, I leveraged ChatGPT's capabilities to generate tailored dialogues and readings for the course. Using AI-driven language models allowed for the creation of content aligned with the participants' target subjects and target locations. The adaptability and extensive knowledge base of AI LLMs proved useful for the

development of specialized materials that included technical terminology, context-specific phrases, and relevant discourse practices.

This approach ensured that the language practice sessions were both relevant and beneficial, considering the participants' diverse backgrounds and target subjects. In conclusion, the use of AI LLMs was a strategic solution to the challenge of creating customized language practice materials, effectively meeting the specific needs of the participants and enhancing their preparation for future academic endeavors.

5.1. DIALOGUE GENERATION PROMPTS

Prompts are specific instructions or questions provided to a language model (like ChatGPT) to generate a particular type of text or dialogue (Sarrion, 2023). They guide the AI in creating content that meets the user's requirements. According to Li et al. (2024) clarity and specificity are important when crafting effective prompts. It is essential to ensure that prompts are clear and detailed to prevent ambiguity. This involves precisely defining the context, roles, and objectives within the prompt. For instance, rather than a vague request like, "Generate a dialogue about a scientific topic," it is more productive to specify the topic and setting, such as, "Generate a dialogue between a professor and a student discussing the implications of recent advancements in quantum computing." Such specificity helps guide the respondent accurately and ensures the relevance of the generated content.

Role definition is another important aspect of prompt creation. Delineating the roles of participants within the dialogue or response ensures that the interactions are realistic. This involves specifying the relationship, expertise, and perspectives of the individuals involved. For example, "Compose a dialogue where a graduate student seeks advice from their thesis advisor on improving their research methodology" helps establish the dynamics and expectations within the conversation.

Incorporating key elements or concepts that should be addressed in the response helps align the generated content with the intended learning objectives or thematic focus. By specifying these elements, one can ensure that the dialogue or text remains on-topic and relevant. For example, "Generate a dialogue where students in a study group discuss the ethical implications of using population consensus data, such as privacy and discrimination" includes essential academic aspects that should be covered, as well as the roles, text type, and context.

5.1.1 EXAMPLES OF DIALOGUE GENERATION PROMPTS

The following examples illustrate various prompts designed to generate dialogues across a spectrum of settings and contexts. These prompts serve as models for creating contextually appropriate and relevant conversations, enabling the exploration of different scenarios and roles. By employing such prompts, educators can simulate a range of interactions, from formal academic discussions to informal social exchanges, facilitating targeted practice and analysis in diverse linguistic and situational frameworks.



Academic Conference:

"Generate a dialogue between a researcher presenting their findings at an academic conference and an attendee asking in-depth questions about the methodology used."

Professor-Student Meeting:

"Write a dialogue where a student meets with their professor to discuss feedback on a research paper and seek advice on how to improve it."

Research Collaboration:

"Compose a dialogue between two academics discussing a potential collaboration on a new research project, focusing on formal language and technical terms."

Study Group:

"Generate a dialogue between students in a study group casually discussing their understanding of a recent lecture and helping each other with assignments."

Group Project:

"Generate a dialogue between members of a group project meeting to divide tasks, set deadlines, and ensure everyone understands their responsibilities."

Campus Life:

"Write a dialogue between two students chatting informally about their experiences on campus, including extracurricular activities and social events."

Peer Advice:

"Create a dialogue between two students where one is giving the other advice on managing coursework and balancing it with part-time work."

Social Event:

"Write a dialogue between students at a campus social event discussing their majors, favorite classes, and plans for the weekend."

To tailor the course content to the specific target subjects that participants were preparing to study, I utilized targeted prompts such as the ones below. These prompts were designed to align with the participants' future academic focus, ensuring that the practice exercises were relevant to their forthcoming studies.

Research Seminar:

"Create a dialogue between a student and their advisor during a seminar, where the student is presenting their research on strategic management practices and seeking feedback on their theoretical framework and analysis."

Study Group Discussion:

"Write a dialogue among business students in a study group discussing the key takeaways from a recent lecture on consumer behavior and how they might apply these concepts to a group project."

Policy Proposal Review:

"Create a dialogue between a government policy analyst and a policymaker reviewing a new policy proposal on urban development. The discussion should include formal assessments of the policy's potential impact and implementation strategies."

Academic Journal Review:

"Generate a dialogue between a researcher and a peer reviewer discussing the statistical analysis presented in an academic journal article. The conversation should focus on the validity of the methodology and the interpretation of results."

Peer Discussion:

"Write a dialogue between accounting students informally discussing their experiences with different accounting software tools and sharing tips on how to use these tools effectively in their studies."

Campus Discussion:

"Generate a dialogue between students discussing a recent government policy change in a casual setting, such as a coffee shop, where they share their opinions and how it might affect their daily lives."

By incorporating specialized prompts, it became feasible to develop a variety of dialogues, discussion questions, and readings centered around three key components: language register, academic subject (target subject), and regional context (target location). The subsequent sections of this paper will explore these components in detail, discussing how ChatGPT was employed to create relevant instructional materials. Examples of these materials will be provided to illustrate how each component was addressed. It is important to note that the examples included here represent only a portion of the materials used in the course. They serve to demonstrate how ChatGPT can assist educators in quickly and efficiently generating content that encompasses multiple relevant areas.

5.2 GENERATING MATERIALS FOR REGISTER

One of the critical elements to emerge from the initial discussions and suggestions regarding the course content was the participants' desire to practice English in both formal and informal settings. During these conversations, it became clear that the course participants had distinct needs and preferences for their language practice. They expressed a strong interest in practicing everyday casual English to help them engage in small talk and build relationships with people in informal social settings. This included practicing conversational phrases, phrasal verbs, and expressions commonly used in daily interactions, which are essential for fostering friendships and navigating social situations smoothly.

In addition to this, the course participants also highlighted the importance of mastering formal English for academic purposes. They wanted to develop their proficiency in using formal expressions, particularly those suited for academic contexts and professional interactions. This included learning how to effectively communicate with professors, debate academic concepts, and participate in scholarly discussions. Having a strong command of formal English could be crucial for their success in academic environments, where precise and polished language is often required.

As the teacher, I chose to use ChatGPT for creating materials and dialogues in both formal and informal English for several reasons. ChatGPT offers a flexible and efficient way to generate diverse, contextually appropriate language examples, allowing for the quick creation of scenarios that reflect real-life situations in both casual conversations and formal academic discussions. This helps provide students with language examples for various contexts.

The AI tool produces high-quality, natural-sounding language, highlighting the nuances between casual and formal English. By modeling these distinctions through realistic dialogues, students can practice using different language registers effectively. Additionally, ChatGPT helps keep materials current with evolving language trends and regional usage, incorporating contemporary slang and cultural references important for informal English. This ensures that the content remains relevant and reflective of changing linguistic patterns.

5.2.1 EXAMPLES OF GENERATING MATERIALS FOR REGISTER

In this section, I will include two examples of dialogues created by ChatGPT for an informal context and a formal context. The following is a dialogue with informal language. The situation is a Korean student meeting another student for the first time and making small talk.

Jiho: Hi! Is this seat taken?

Alex: Hey! No, go ahead. I'm Alex, by the way.

Jiho: Nice to meet you, Alex. I'm Jiho. I just arrived from Korea.

Alex: Wow, that's awesome! Welcome! How are you finding it here so far?

Jiho: Thanks! It's pretty exciting but a bit overwhelming. Everything is so new.

Alex: Totally get that. I felt the same when I first moved here. What are you studying?

Jiho: I'm studying public policy. How about you?

Alex: Cool! I'm majoring in economics. So, kind of related.

Jiho: Nice! Have you been here long?

Alex: Yeah, I've been here for two years now. It's a great place once you get used to it. Have you checked out any local spots yet?

Jiho: Not really. I'm still trying to get settled in. Any recommendations?

Alex: For sure! There's this amazing coffee shop downtown. It's a great place to chill and meet people. Also, the park nearby is pretty cool.

Jiho: That sounds great. I'll definitely check those out. How do you usually spend your weekends here?

Alex: I like to explore new places and sometimes just hang out with friends. There's always something going on. How about you? Any hobbies?

Jiho: I enjoy reading and hiking. I heard there are some nice trails around here.

Alex: Oh, definitely! There are some wicked trails. Maybe we can go hiking sometime.

Jiho: That would be awesome! I'd love that.

Alex: Cool! Hey, if you ever need anything or have questions about the area, just hit me up.

Jiho: Thanks, Alex. I appreciate it. Looking forward to getting to know the place better.

Alex: No problem, Jiho. It's gonna be great. Catch you later!

Jiho: See you around, Alex!

Using this dialogue as a model, we can extrapolate some useful, casual expressions and questions for small talk. This dialogue can therefore act as a model for controlled practice and language analysis before scaffolding towards free practice such as role plays. Here are a few examples of useful phrases and questions from this dialogue.

- go ahead
- by the way
- How are you finding it so far?
- Totally get that
- Any recommendations?
- great place to chill
- check out
- hang out
- How about you?
- hit me up
- Catch you later!
- See you around

The following is a dialogue that takes place in a formal academic context between a professor and a student. The student is asking for advice about an economics assignment.

Student: Good afternoon, Professor Jacobs. May I have a moment of your time to discuss the economics assignment you assigned last week?

Professor Jacobs: Good afternoon, Emily. Of course, please take a seat. What specifically would you like to discuss about the assignment?

Student: Thank you, Professor. I've reviewed the assignment and begun my research, but I'm a bit uncertain about how to approach the question regarding the impact of monetary policy on inflation. Could you clarify the expectations for that section?

Professor Jacobs: Certainly, Emily. The key to addressing that question is to first provide a thorough explanation of how monetary policy works in general—what tools the central bank uses, such as interest rates and open market operations. Following that, you should analyze the specific ways these tools can influence inflation, both in theory and through historical examples. Does that make sense?

Student: Yes, that's helpful. I was also wondering how detailed our analysis needs to be. Should we focus on a broad overview, or would you prefer a more in-depth examination of specific case studies?

Professor Jacobs: I would recommend a balanced approach. Begin with a broad overview to set the context, then delve into one or two specific case studies that illustrate the points you've made. Make sure to critically evaluate the effectiveness of the policies in those cases, highlighting both the successes and any unintended consequences. This will demonstrate a deeper understanding of the material.

Student: Understood, Professor. One last question, if I may. In terms of sources, are there any particular references or types of data you would recommend including in our analysis?

Professor Jacobs: It's important to include a mix of primary and secondary sources. For primary sources, consider using data from central banks or government publications that detail the monetary policies implemented during the period you're examining. For secondary sources, peer-reviewed journal articles and books by reputable economists will be valuable for providing context and analysis. Be sure to critically assess the credibility and relevance of all your sources.

Student: That's very clear, thank you, Professor Jacobs. I feel much more confident about how to proceed with the assignment now.

Professor Jacobs: I'm glad I could assist, Emily. If you have any further questions as you work on the assignment, don't hesitate to reach out. I look forward to reading your analysis.

Student: I appreciate your time and guidance, Professor. I'll certainly reach out if I need any more help. Have a good afternoon.

Professor Jacobs: You too, Emily. Best of luck with your work.

Again, with this dialogue, we can find many useful phrases and expressions that could be useful in formal situations. Here are some examples.

- May I have a moment of your time to discuss...

- Good afternoon
- please take a seat
- I'm a bit uncertain about...
- Could you clarify...?
- I was also wondering how...
- Make sure to...
- I'm glad I could assist you
- If you have any further questions [...], don't hesitate to reach out
- I appreciate your time
- Best of luck with your work

As demonstrated in the earlier dialogue examples, ChatGPT appears to be quite effective for generating texts for various contexts and formality registers, as well as different academic subjects. The following section will explore this aspect in greater depth.

5.3 GENERATING MATERIALS FOR TARGET SUBJECTS

A significant issue that emerged during the syllabus discussions with the course participants was their expressed need to practice language specific to the academic subjects they will be studying abroad. The courses that the participants were due to be enrolled in included MBA (Master of Business Administration), Public Administration and Policy, Statistics, and Finance and Accounting. Given that these disciplines fall outside of my area of expertise, I decided to employ ChatGPT to generate relevant instructional materials tailored to these academic fields.

Leveraging advanced technologies such as ChatGPT for generating dialogues and discussion questions tailored to students' future academic subjects could represent a significant pedagogical advancement in TESOL, especially within the specific field of English for Academic Purposes (EAP). This approach to materials development may enhance the relevance of language practice by aligning it with the specific academic and professional contexts students may encounter, such as the use of specific terminology and professional jargon.

Moreover, ChatGPT's versatility in generating content across a broad range of disciplines allows educators to address language needs in areas beyond their specialization. An educator with a TESOL background, such as myself, may not have in-depth knowledge of statistical methods or accounting principles, but can still use ChatGPT to create dialogues and discussion questions relevant to these fields. This capability enables the development of practice materials that may be more closely applicable to the student's future studies and professional environments.

5.3.1 EXAMPLES OF GENERATING MATERIALS FOR ACADEMIC SUBJECTS

The following is a dialogue created featuring students discussing the development and implementation of public policy. Public policy is not a field I have much knowledge about, so allowing ChatGPT to

fill in those gaps in my knowledge creates a language model that has more relevance to the academic subject.

Samantha: Alright, everyone. Today, we're discussing how public policy is developed and implemented. What do you think are the main steps in the policy-making process?

Emily: I think it starts with identifying a problem. The government has to know what needs to be addressed before they can develop any policies.

David: Exactly, Emily. And once the problem is identified, they need to set goals and objectives for what they want to achieve.

Michael: Right, and after setting goals, they usually consider various policy options. They look at different strategies to solve the problem.

Lisa: True, but I think public consultation is also a critical step. Getting input from stakeholders and the public can help shape the policy in a meaningful way.

Samantha: Definitely. Public consultation is essential. What do you think about the implementation phase?

Emily: Implementation can be tricky. The government needs to allocate resources and ensure that the agencies responsible are well-prepared to execute the policy.

David: I agree. Plus, they need to monitor and evaluate the policy to see if it's achieving the desired outcomes.

Michael: Absolutely. Evaluation helps to identify any issues and make necessary adjustments. It's a continuous cycle.

Lisa: I think communication is key throughout the process. Clear communication with the public and between different government agencies is crucial for effective implementation.

Samantha: Good point, Lisa. Now, what strategies do you think the government can use to address policy problems?

Emily: One strategy is regulation. The government can create rules and laws to control behavior and solve problems.

David: True, but sometimes incentives work better than regulations. For example, offering tax breaks or subsidies can encourage desired behaviors without imposing strict rules.

Michael: That's a good point, David. Another strategy is public education and awareness campaigns. Informing the public about issues and solutions can lead to voluntary changes in behavior.

Lisa: And don't forget about collaboration with private sectors and non-profits. Partnering with other organizations can provide additional resources and expertise.

Samantha: I agree with all of you. What about the challenges in developing and implementing policies?

Emily: One big challenge is political opposition. Different political parties and interest groups may have conflicting interests.

David: Exactly. Another challenge is limited resources. Budget constraints can limit what the government can do.

Michael: And sometimes there's a lack of data. Without accurate data, it's hard to develop effective policies.

Lisa: Plus, public resistance can be a major hurdle. If the public doesn't support a policy, it's difficult to implement it successfully.

Samantha: Great points. How can the government overcome these challenges?

Emily: Building consensus is important. Engaging with all stakeholders to find common ground can help overcome political opposition.

David: I think prioritizing policies based on available resources and potential impact is crucial. The government needs to make tough decisions about what to focus on.

Michael: Investing in data collection and research can help. Better data leads to better policies.

Lisa: And maintaining open communication with the public can reduce resistance. Transparency and involving the community in decision-making can build trust and support.

Samantha: These are excellent suggestions. It's clear that developing and implementing public policy is a complex process that requires careful planning and collaboration.

Emily: Absolutely. It's all about finding the right balance and being adaptable.

David: Agreed. Policies need to be dynamic and responsive to changing needs.

Michael: And continuous learning and improvement are essential. Evaluating what works and what doesn't help in refining policies.

Lisa: Exactly. It's a challenging but rewarding process when done right.

Samantha: Thanks for the insightful discussion, everyone. Let's keep these points in mind as we continue our studies in public policy.

This dialogue incorporates numerous elements relevant to specific issues within public policy, such as problem identification, public consultation, resource allocation, incentives, awareness campaigns, budget constraints, data accuracy, and stakeholder engagement. Normally, compiling and integrating these topics would require extensive research; however, by utilizing ChatGPT, I was able to quickly generate a subject-specific overview in the form of a dialogue. These topics were already familiar to the course participants preparing to study public policy, and the dialogue not only served as a language model but also provided a foundation for group discussions on the topics included.

In this paper, I have thus far presented dialogue examples. However, ChatGPT was also utilized to generate discussion questions, particularly those relevant to the target subjects of the course participants. This approach proved beneficial, as I am not well-versed in the topics typically discussed within these academic disciplines. Below are examples of discussion questions specifically created for the fields of finance and accounting.

Accounting Principles

What are the basic accounting principles and why are they important?

Explain the difference between accrual accounting and cash accounting.

How do the principles of GAAP (Generally Accepted Accounting Principles) guide financial reporting?

Financial Statements

What are the main components of a balance sheet?

How is the income statement different from the cash flow statement?

Why is the statement of retained earnings important for investors?

Managerial Accounting

How does cost-volume-profit analysis help in decision-making?

Explain the concept of variance analysis and its importance in budgeting.

What are the different types of budgeting methods used in managerial accounting?

Corporate Finance

What factors should a company consider when making capital budgeting decisions?

How does the capital structure of a company affect its overall risk and return?

What is the significance of the cost of capital in corporate finance?

Financial Markets and Institutions

How do central banks use monetary policy to influence financial markets?

What role do financial institutions play in the economy?

Explain the differences between primary and secondary markets.

Investment Analysis

How would you assess the risk and return of a particular investment?

What is the Efficient Market Hypothesis and how does it impact investment strategies?

How do diversification and asset allocation contribute to portfolio management?

Auditing and Assurance Services

What are the key stages in the auditing process?

How do internal controls help in preventing and detecting fraud?

What ethical considerations must auditors keep in mind while conducting an audit?

Taxation

Explain the difference between progressive and regressive tax systems.

How do tax credits and tax deductions impact an individual's tax liability?

What are the implications of international tax laws for multinational corporations?

These questions cover several topics that I am not familiar with, including accrual accounting, GAAP (Generally Accepted Accounting Principles), cost-volume-profit analysis, variance analysis, primary

and secondary markets, and the Efficient Market Hypothesis. Without ChatGPT, incorporating these subjects into discussion questions would have required extensive research. In the classroom, I provided these questions to the course participants, allowing them to read, select, and discuss those they found most useful and relevant. This approach to using generated questions may help to address any potential shortcomings in the effectiveness and relevance of the questions.

5.4 GENERATING MATERIALS FOR TARGET LOCATIONS

The third factor considered in developing the course materials was the diverse array of locations where the participants would pursue further studies. These destinations included Bath and Manchester in the UK, as well as Florida, California, Michigan, and Colorado in the USA. While all these locations are English-speaking, they have considerable diversity in terms of dialect, accent, slang, and cultural norms.

In the UK, for instance, the accents and dialects of the general public in Bath and Manchester will differ. Bath, located in the southwest of England, is known for its Received Pronunciation, whereas Manchester, in the northwest, has a distinct regional accent with its own unique slang and idiomatic expressions. These differences can pose challenges to comprehension and communication, particularly for non-native speakers.

Beyond language, these locations also differ in other cultural dimensions, such as food, social customs, and lifestyle. Understanding and adapting to these regional differences would be crucial for the course participants, as it will affect their daily interactions, academic experiences, and overall cultural adjustment. Therefore, incorporating this contextual awareness into the course materials was essential to better prepare the students for the linguistic and cultural diversity they would encounter in their studies abroad.

5.4.1 EXAMPLES OF GENERATING MATERIALS FOR TARGET LOCATIONS

The course participants exhibited a notable interest in the food culture of their prospective study locations. I perceived a mix of enthusiasm and apprehension regarding the new culinary experiences and dietary changes they anticipated encountering. On one hand, there was excitement about exploring diverse cuisines and local food traditions. On the other hand, some participants expressed concerns about adapting to unfamiliar dietary practices and potential changes in their eating habits. This focus on food culture led me to create several materials with ChatGPT covering with this subject with examples and information. Below are six short reading texts created by ChatGPT that contain a general introduction to the food cultures of the six target locations.

Bath, UK

In Bath, UK, visitors can enjoy a variety of traditional and contemporary British cuisine. One of the city's most famous treats is the Bath bun, a sweet bread roll topped with sugar and currants.

Bath is also known for its elegant afternoon tea experiences, complete with scones, clotted

cream, and an assortment of finger sandwiches and pastries. The local dining scene features many quaint tea rooms and historic pubs where visitors can savor classic British dishes like fish and chips, steak and ale pie, and roast dinners. Bath's culinary offerings also include fine dining restaurants that highlight locally sourced ingredients and modern British cooking techniques.

Manchester, UK

Manchester, a vibrant and diverse city, offers a wide array of culinary delights. The city's food scene is a reflection of its multicultural population, with an abundance of Indian, Chinese, and Middle Eastern eateries. Manchester's famous Curry Mile in Rusholme boasts numerous Indian and Pakistani restaurants serving delicious curries, biryanis, and kebabs. For traditional British fare, visitors can try the hearty Manchester pie, fish and chips, or a full English breakfast. The Northern Quarter is known for its trendy cafes and independent restaurants, offering everything from gourmet burgers and artisan pizzas to vegan and vegetarian options.

Los Angeles, USA

Los Angeles is a food lover's paradise, known for its diverse and innovative culinary scene. The city's cultural diversity is reflected in its cuisine, with an abundance of Mexican, Korean, Japanese, and Thai restaurants. Visitors can enjoy authentic street tacos, Korean BBQ, sushi, and Thai curry. LA is also famous for its food trucks, which offer a variety of gourmet street food, from lobster rolls to fusion tacos. Health-conscious diners will find plenty of organic, farm-to-table, and vegan options throughout the city. Iconic LA dishes include the In-N-Out Burger, California-style pizza, and avocado toast.

Florida, USA

Florida's cuisine is a vibrant mix of Southern, Caribbean, and Latin influences, reflecting the state's diverse cultural heritage. Seafood is a staple, with fresh catches like grouper, mahi-mahi, and stone crab claws featured prominently on menus. Key West's famous Key lime pie is a must-try dessert, made with tart Key lime juice and a graham cracker crust. Cuban cuisine is particularly popular in Miami, with dishes like the Cuban sandwich, ropa vieja, and tostones. Florida also offers a variety of tropical fruits, such as oranges, grapefruits, and mangos, often used in refreshing juices and desserts.

Michigan, USA

Michigan's culinary scene is characterized by its hearty, comforting Midwestern fare and fresh, locally sourced ingredients. The state is renowned for its cherries, particularly in Traverse City, where visitors can enjoy cherry pies, jams, and even cherry-infused wines. Detroit-style pizza, with its thick, chewy crust and caramelized edges, is a local favorite. Coney dogs, topped with chili, onions, and mustard, are a staple at diners throughout the state. Michigan's craft beer scene is also thriving, with numerous breweries offering a wide range of unique and flavorful beers.

During the fall, apple orchards and cider mills provide fresh apple cider and delicious apple doughnuts.

Colorado, USA

Colorado's food scene is known for its emphasis on fresh, locally sourced ingredients and outdoor, adventure-inspired dining experiences. The state's ranching heritage is reflected in its popular dishes, such as bison burgers, elk steaks, and Colorado lamb. The Rocky Mountain trout is a local delicacy, often grilled or smoked to perfection. Denver, the state's capital, boasts a burgeoning food scene with farm-to-table restaurants, food halls, and craft breweries. Green chili, often served smothered over burritos or as a stew, is a regional specialty. Colorado is also famous for its craft beer industry, with numerous breweries producing innovative and award-winning beers.

These summaries sparked extensive discussion, questions, and insights among the students. They engaged in group discussions about the reading materials, sharing their preferences and expectations. Subsequently, as a class, we examined photographs of various foods and explored the distinctions between restaurant, café, and general food cultures in Korea, the US, and the UK. While I am not well-acquainted with the US destinations, the information about Bath and Manchester is accurate and I was able to provide information and examples based on my experiences.

The course participants also wanted to learn more about the kinds of attractions and tourist destinations they would be able to experience in their target locations. Below is an AI-generated dialogue between a student studying in Michigan and a student studying in Colorado. In the prompt for this conversation, it was stated that the two students should share insights about notable places and attractions in their respective locations, offering information for prospective visitors.

Student from Michigan (Alex): Hey Jamie, it's great to meet you! I hear you're studying in Colorado. I thought it would be fun to exchange some tips about cool places to visit in our respective states. I'll start—what are some must-see spots in Colorado?

Student from Colorado (Jamie): Hi Alex! That sounds like a great idea. In Colorado, you definitely don't want to miss the Rocky Mountain National Park. It's fantastic for hiking, with trails that offer breathtaking views of the mountains and beautiful alpine lakes. You can also spot wildlife like elk and bighorn sheep.

Alex: That sounds amazing! I'll have to add that to my travel list. In Michigan, one of the top attractions is Mackinac Island. It's a unique place where motor vehicles are banned, so you get around by bike or horse-drawn carriage. The island is known for its historic sites, stunning views of Lake Huron, and delicious fudge.

Jamie: Wow, Mackinac Island sounds charming! Another must-visit in Colorado is Denver's Museum of Nature & Science. It's really interactive and has exhibits on everything from space to dinosaurs. It's a great spot if you're interested in science and natural history.

Alex: That museum sounds fantastic! In Michigan, if you're into history, you should check out The Henry Ford Museum in Dearborn. It has a vast collection of American historical artifacts, including the original bus where Rosa Parks made her famous stand.

Jamie: That's a great suggestion! For something more outdoorsy in Colorado, you should visit Garden of the Gods in Colorado Springs. It's a public park with stunning red rock formations, and it's perfect for rock climbing or just taking a scenic walk.

Alex: Garden of the Gods sounds incredible! And if you're ever in Michigan in the winter, you should visit the Sleeping Bear Dunes National Lakeshore. The snow-covered dunes offer fantastic winter views and opportunities for snowshoeing and cross-country skiing.

Jamie: That sounds like a winter wonderland! One more tip—if you're a fan of craft beer, Colorado has a booming craft beer scene. Denver and Boulder, in particular, have numerous breweries and brewpubs you should check out.

Alex: I'll definitely keep that in mind. Michigan also has a great craft beer scene, especially in cities like Grand Rapids. It's known for having a high concentration of breweries.

Jamie: It's great to learn about these places from you, Alex. It seems like both Michigan and Colorado have a lot to offer!

Alex: Absolutely, Jamie! It's been fun exchanging recommendations. I'm sure both our states have so much to explore and enjoy.

This dialogue integrates all the key elements analyzed throughout this paper. The interlocutors are two students unfamiliar with these locations so the roles match those of the course participants. The dialogue has a casual register, incorporating a variety of useful phrases that can be used in interpersonal interactions. Moreover, the topic of discussion aligns with the target locations that my course participants were particularly interested in. This dialogue and the other examples included in this paper highlight the capacity of large language models (LLMs) to generate content and materials that are contextually appropriate, stylistically consistent, and tailored to the specific learning needs of a particular group of students.

6. FURTHER STUDY

This paper focused specifically on the use of AI tools and the creation of instructional materials for a specific group of students that had a particular set of needs. The materials generated were used as language input models for controlled practice and generating discussion, which could then lead toward free practice and personalization. Although I gained positive feedback from the course participants during and after the course, further studies and research could delve more specifically into their opinions, experiences, and perceptions concerning these AI-generated materials.

Furthermore, the materials that were created with ChatGPT were static and did not proactively respond to the conditions in the class, in the way that a chatbot is more proactive than a textbook. As with traditional materials, it was the responsibility of the instructor and the other course participants to be responsive and reactive when using the materials. I plan to utilize the flexible and reactive aspects of



AI more in future courses, however, it may prove challenging to do this while keeping the focus on speaking skills. Pausing spoken interactions to type and read responses may inhibit speaking fluency and practice time.

Several services and platforms are aiming to bridge the gap between AI and speaking practice, such as Speak (www.speak.com), which utilizes speech recognition and computer-generated speech synthesis (similar to text-to-speech) to allow language learners to practice speaking with an AI interlocutor. Another option is to utilize AI as an interactive support tool during debates and discussions, although this may face the same limitations in terms of fluency mentioned in the previous paragraph. This approach is outlined by Van Horn (2024), who found it helped with autonomy and engagement.

As this technology develops, educators and AI services can hone how best to utilize these tools for realistic and natural interactions. Further research will be needed into the aspects of using AI for materials development, language skills practice, assessment, differentiated instruction, and the learning outcomes in relation to these advancements.

7. CONCLUSION

In summary, this paper has explored the transformative potential of ChatGPT in the context of a case study course for employees preparing for international study. By examining the use of ChatGPT to create educational materials tailored to various language registers, academic subjects, and cultural contexts, it has become evident that AI-driven tools can enhance the relevance and adaptability of instructional resources.

The analysis demonstrated that ChatGPT can support the implementation of differentiated instruction, specifically in terms of generating content that addresses diverse learner needs and preferences. Its ability to produce materials suited to both formal and informal registers ensures that learners can engage with language in a variety of contexts, from academic discourse to everyday interactions. Furthermore, the AI model's capacity to create subject-specific content allows for targeted practice in fields such as public policy, business administration, and finance, thereby aligning language learning with students' future academic and professional pursuits. Additionally, ChatGPT's role in adapting materials to different cultural settings underscores its value in preparing learners for the linguistic and cultural nuances they will encounter abroad. By generating contextually relevant content, the AI tool facilitates a more comprehensive and culturally sensitive approach to materials development.

Overall, the findings of this paper highlight the potential of ChatGPT to enrich the educational experience by providing customized, context-aware resources that support diverse learning needs. As AI technology evolves, its application in educational contexts is likely to expand, offering new opportunities for enhancing instruction and preparing learners for a globalized world.

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