



## A needs analysis of english proficiency at a State Vocational Institute: A case study

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### ABSTRACT

This study reports on the result of a needs analysis for English proficiency. in the Instrumentation program at State Vocational Institute A. It is done to improve syllabus alignment with professional demands. The primary objective of this paper to identify gaps in the existing syllabus by analyzing responses from 27 fifth-semester students who had completed English courses in their third semester and 50 alumni working at the field. Using a qualitative descriptive method, the case study collected data through a structured questionnaire that focused on identifying and addressing practical challenges in professional English usage. Results from students' responses revealed that while foundational English skills, such as understanding instructions and interacting in class, were rated positively, students experienced difficulties in technical writing, oral presentations, and expressing opinions related to their field. These challenges indicate that the existing syllabus may not fully equip students with the language skills required to perform complex tasks in professional contexts. Alumni responses further supported these findings, highlighting inadequacies in practical communication skills, especially in technical reporting and workplace interactions. The study identified emerging gaps between the English proficiency of both students and alumni and the demands of academic and professional environments. These findings suggest the need for curriculum revisions to address the specific linguistic challenges faced by students and graduates so as to ensure that future revisions align closely with workplace expectations.

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## INTRODUCTION

State Vocational Institute A, a specialized institution in Indonesia, is dedicated to preparing students for careers in meteorology, climatology, and geophysics. As a state-run service academy, it equips students with technical expertise and practical skills required to serve in governmental and scientific agencies. Its curriculum integrates theoretical knowledge with hands-on training,

ensuring graduates are ready to address challenges in weather forecasting, climate studies, and geophysical instrumentation. English proficiency has become essential in specialized academic fields, especially in technical and scientific disciplines (Ramírez-Castañeda, 2020). Given the increasing globalization of scientific knowledge, English serves as a critical tool for academic and professional success. It enables students and professionals to access broader information, participate in international collaborations, and communicate scientific findings effectively (Owens & Hite, 2022). At State Vocational Institute A, English proficiency is particularly important for students in specialized programs. In the Instrumentation program for example, students are expected to engage with technical English material, data, and instrumentation specifications often published in English.

Despite the importance of English proficiency, there is a potential gap between students' current English skills and the language demands of their field (Aizawa, Rose, Thompson, & Curle, 2023). This gap can affect both academic performance and career readiness, since graduates need to interpret and communicate complex technical information in English. Addressing these needs requires a comprehensive needs analysis to tailor English instruction to the specific requirements of their field. This issue becomes even more pressing in the context of globalization, where international collaboration and communication are integral to professional success in fields like meteorology, climatology, and geophysics. Professionals in these areas often work with multinational teams, contribute to global research initiatives, and participate in international conferences where English serves as the primary medium of communication (Aizawa et al., 2023). Additionally, access to cutting-edge research and technical manuals—frequently published in English—is essential for staying updated in these disciplines. Revising the English curriculum to incorporate skills such as technical reading, writing, and presentation tailored to these professional contexts will better equip graduates to navigate the demands of a globalized workforce and excel in their careers.

Needs analysis is a foundational approach in educational research, primarily designed to identify and address the specific needs, motivations, and challenges of learners within a curriculum (Chiu et al., 2023; Trujeque-Moreno, Romero-Fernández, Esparragoza-Barragán, & Villa-Jaimes, 2021). Needs analysis involves identifying target needs and learning needs, as emphasized by (Hutchinson & Waters, 1992). Target needs encompass what learners need to do in their target situations, while learning needs focus on the knowledge and skills required to bridge the gap between learners' current proficiency and desired competencies. This theoretical foundation highlights the importance of structuring courses to match both the practical demands of the workplace and the learning processes necessary to achieve those demands.

Over time, the approach to needs analysis has evolved significantly. Early studies by (Hutchinson & Waters, 1992) introduced the concept of aligning learning objectives with professional requirements, while more recent studies emphasize the relevance of tailoring instruction to learners' goals and motivations (Pranoto & Suprayogi, 2020). Modern perspectives stress that language acquisition is most effective when learning is meaningful and directly related to learners' aspirations (Tomlinson & Jarvis, 2023). Evaluating learner needs allows educators and curriculum developers to structure courses that better support academic and professional development. This approach enhances engagement and motivation by demonstrating the direct relevance of course content to students' career goals. Needs analysis also serves as a diagnostic tool, examining not only linguistic necessities but also learners' expectations, prior experiences, and perceived knowledge gaps (Oktarina, Inderawati, & Petrus, 2022). This perspective underscores the importance of aligning educational content with learners' needs to foster effective and targeted learning experiences. Such alignment is particularly critical in vocational education, where language instruction must reflect both academic goals and professional applications (Chiu et al., 2023; Trujeque-Moreno, Romero-Fernández, Esparragoza-Barragán, & Villa-Jaimes, 2021).

Technical skills in English, such as the ability to read and interpret instrument manuals, play a pivotal role in enhancing students' productivity in their professional work. In meteorology, climatology, and geophysics, professionals frequently rely on precise technical documentation to operate, troubleshoot, and maintain complex equipment. A lack of proficiency in understanding these materials can lead to errors, inefficiencies, and delays in critical operations. By equipping students with the ability to comprehend technical texts, the curriculum can ensure that graduates are better prepared to perform their tasks efficiently and accurately, thereby contributing to overall organizational effectiveness. This highlights the necessity of integrating specialized English training into the syllabus to align with the technical demands of the workplace.

Recent studies in needs analysis have further refined the methodological framework of needs analysis. Researchers now use a mix of qualitative and quantitative methods, including surveys, interviews, and focus groups, to collect data directly from the target learners (Park, 2021; Thepseenu, 2020). Many studies argue that needs analysis must go beyond surface-level language requirements, diving into cultural, psychological, and situational factors that shape learners' attitudes toward language acquisition (Choudhary, 2024). By identifying gaps between learners' current abilities and desired outcomes, needs analysis informs the instructional design, content, and delivery methods of educational programs. Needs analysis enable instructors to design lessons that more effectively cater to the cognitive, emotional, and social aspects of learning (Roman, Brantley-Dias, Dias, & Edwards, 2022). This analytical approach acknowledges its role in providing a comprehensive understanding of learner contexts and backgrounds, facilitating tailored instruction that bridges existing gaps and empowers learners. Needs analysis serves as an invaluable framework for developing educational programs by enabling systematic assessment and responsive curricular adjustments. Such a data-driven approach helps to prioritize meaningful and transformative learning experiences for students. A needs analysis study aims to support teachers, curriculum developers, and syllabus designers in creating an English learning experience that will be valuable and relevant for students in their future careers (Aprianto, 2020). Various studies have highlighted the importance of needs analysis in English language learning across various disciplines, such as vocational high school (Pambudi & Harjanto, 2020), tourism (Al-Malki, Javid, Farooq, Algethami, & Al-Harthi, 2022), pharmacy (Syakur, Zainuddin, & Hasan, 2020), engineering (Changpueng & Pattanapichet, 2023; Thepseenu, 2020), and hospitality (Lertchalermtipakoon, Wongsun, & Kawinkoonlasate, 2021). State Vocational Institute A has a specific focus in preparing students for careers in meteorology, climatology, and geophysics, so English proficiency emerges as a critical skill to assist academic success and professional competence. This research focuses on the Instrumentation program, which is one of four programs at State Vocational Institute A. The increasing globalization of scientific knowledge and communication necessitates the graduates to engage effectively with technical documents, reports, and international collaborations, which are often conducted in English. Despite its recognized importance, preliminary findings highlight a gap between students' current English proficiency and the linguistic demands of their future professions, particularly in areas such as technical writing, oral presentations, and workplace communication. This discrepancy underscores the need for a targeted needs analysis to identify specific gaps and develop a curriculum that aligns with industry expectations. Unlike previous studies that broadly address English for Specific Purposes (ESP) in vocational education, this research uniquely integrates perspectives from both students and alumni of Instrumentation program, capturing insights from academic and professional contexts. By incorporating a refined need analysis, this study seeks to bridge the gap between theoretical language instruction and real-world professional requirements, in a specialized academic and professional context. This study aims to explore the English language learning experiences of current students in the Instrumentation program while also investigating how these experiences have influenced the alumni of the program. Additionally, it examines potential gaps in English proficiency, particularly in relation to the demands of academic and professional fields.

## RESEARCH METHODOLOGY

This case study employed qualitative descriptive approach by applying a needs analysis framework using questionnaires distributed to both students and alumni. The questionnaire comprises two main components: target needs and learning needs (Ekayati, Manurung, & Yenni, 2020; Maruf, Desembrianita, & Husain, 2021; Pratami, Rizal, & Haryanto, 2021). Target needs include necessities, lacks and wants. Necessities are elements of language that the learner must comprehend. Lacks refer to the aspects of language that the learner has either mastered or not mastered. Wants refer to the specific elements of language that the student desires to learn. Learning needs include things that are needed in the learning process (Filgona, Sakiyo, Gwany, & Okoronka, 2020).

While the primary method used in this study was a structured questionnaire, other techniques such as focus group discussions (FGDs) with industry stakeholders could further enrich the data. FGDs provide an opportunity to gather in-depth insights from professionals who understand the specific language demands in the workplace. These discussions allow stakeholders to share their experiences and expectations regarding the linguistic competencies required in real-world scenarios, offering a valuable complement to the perspectives of students and alumni. By including industry stakeholders, researchers can identify gaps that may not be evident from questionnaire responses alone, such as the need for soft skills in cross-cultural communication or the ability to interpret technical documentation in collaborative projects (Chiu et al., 2023). Incorporating FGDs as part of needs analysis framework would strengthen the study's findings by ensuring that the revised curriculum aligns not only with academic goals but also with the evolving demands of the professional field.

The questionnaires employed a 4-point Likert scale following a pilot test to refine its structure and content. The pilot testing was conducted with 30 third-semester students currently taking English courses and 38 alumni to ensure clarity and reliability. Based on the pilot test result, the Likert scale was revised from 5 points to 4 points eliminating the neutral choice. This adjustment aimed to reduce ambiguity and encourage more decisive responses, aligning with its effectiveness in capturing nuanced attitudes, opinions, and perceptions (Alabi & Jelili, 2023; Alordiah & Ossai, 2023). The final set of questionnaires consisted of statements with options such as "strongly agree," "agree," "disagree," and "strongly disagree." The questionnaires were distributed via Google Forms to 27 fifth-semester students in the Instrumentation program and 50 alumni who are currently employed at the field. State Vocational Institute A is a government-affiliated service academy that specializes in preparing students for careers in meteorology, climatology, and geophysics. The Instrumentation program, in particular, focuses on equipping students with technical knowledge and practical skills in operating and maintaining scientific instruments used in weather forecasting, climate monitoring, and geophysical research.

The fifth-semester students of the 2022/2023 academic year were selected as respondents because they had completed English courses in their third semester, enabling them to provide informed reflections on the relevance and effectiveness of the syllabus. Alumni from the 2018/2019 cohort were also included in the study for several considerations. First, they had accumulated two years of professional experience in the field. Their professional experience allowed them to evaluate how well their English preparation alignment with workplace requirements. In addition to this, these alumni were specifically chosen to offer insights into the practical application of English in professional settings, ensuring that the recommendations derived from this research address both academic and occupational demands. Questionnaire results were analyzed, by using frequency distributions across various response levels on the Likert scale (Hohmann, Cote, & Brand, 2018). The following formula was used to calculate the percentage of each response category:

$$P(\%) = \frac{f \times 100}{N}$$

In this formula,  $f$  represents the frequency or count of responses for a particular option, and  $N$  denotes the total number of respondents. Calculating the percentage distribution of responses helped provide a clearer understanding. It highlighted the extent to which specific English language competencies were deemed necessary by students and alumni. This percentage-based analysis enabled a more comprehensive interpretation of the data (Čegar et al., 2023). It also helped illustrate the relative importance of various language skills within the context of the Instrumentation program in the field. To complement the findings from the questionnaire data, in-depth interviews with both students and alumni could provide a richer and more nuanced understanding of their needs. Interviews can capture detailed personal experiences, uncover underlying challenges, and reveal specific expectations regarding the curriculum that may not surface in questionnaire responses. For instance, students may articulate their difficulties in understanding technical English texts or communicating effectively in simulated workplace scenarios. Alumni, on the other hand, can offer insights into real-world applications of English in their professional environments, highlighting specific gaps between their academic preparation and job requirements. By integrating in-depth interviews into the analysis, researchers can develop a more holistic view of the linguistic competencies required and propose more targeted and effective curriculum revisions.

## RESULTS AND DISCUSSIONS

This section presents the findings derived from the student and alumni questionnaire, it focuses on the perspectives, needs, and expectations regarding English language learning within the context of their academic in the Instrumentation program. Through a careful analysis of responses, key insights have been gathered on the effectiveness of the current English syllabus in meeting students' academic and professional requirements. The discussion that follows delves into various aspects of the students' learning experience, including the course structure, instructional methods, material relevance, and their confidence in using English in both academic and professional contexts.

### Summary Of The Students' Responses

Based on the questionnaire results provided, an analysis of student perspectives on English learning within the instrumentation field reveals several key insights shown in Table 1. A significant majority of students strongly agree (66%) and agree (26%) that lecturers explain the learning plan effectively at the beginning of meetings. By emphasizing a structured instructional approach, lecturers create clearer expectations for the learning process. Furthermore, 92% of students agree or strongly agree that the textbooks used are in accordance with the learning objectives, this suggests that the provided materials align well with course requirements. In terms of classroom interaction, 96% of students acknowledge that they understand instructions given by lecturers, and 90% feel that lecturers deliver clear guidance on assignments and materials. These findings reflect an effective communication strategy in the teaching process. However, when it comes to productive language skills, such as writing and expressing opinions in English, only 46.9% strongly agree and 42.9% agree that they can write well within the field of instrumentation, while a combined 90% agree or strongly agree that they can express opinions. This indicates that while basic communication is adequate, there is room for improvement in more specialized skills like technical writing. On reading and comprehension, 90% of students report being able to understand English literature in the field, with 58% strongly agreeing that they receive sufficient resources to support language learning. This highlights the adequacy of instructional resources but also underscores a potential gap in fully leveraging these resources for advanced language skills. Finally, 56% of students indicate frequent use of English literature in their studies or research,

suggesting a moderate level of engagement with technical English materials. The data collectively emphasize the need for targeted enhancements in writing and speaking skills to meet professional demands in the field of instrumentation while maintaining the strengths in instructional clarity and resource alignment.

**Table 1.** The summary of students' responses

Questions	Respondent's Answer			
	strongly agree	agree	disagree	strongly disagree
In English teaching and learning activities in class, the lecturer explains the learning plan at the beginning of the meeting.	66%	26%	8%	0%
The textbooks used are in accordance with the learning objectives.	42%	50%	8%	0%
Students understand every instruction given by the lecturer in class situations.	62%	34%	4%	0%
The lecturer provides clear instructions in delivering the material and assignments given.	60%	30%	10%	0%
Students are able to write related to the field of instrumentation with good English structure.	46.9%	42.9%	10.2%	0%
Students are able to express opinions in the field of instrumentation in English.	40%	50%	10%	0%
Students are able to answer questions in the field of instrumentation in English.	42%	40%	16%	2%
Students can understand English reading material in the field of instrumentation well.	48%	42%	8%	2%
Students are given sufficient resources and support to improve their English language skills in this course.	58%	32%	10%	0%
Students often use English reading materials in their studies or research in the field of instrumentation	56%	34%	10%	0%

### Summary of the Alumni's Responses

The results of the alumni questionnaire provide valuable insights into the relevance and effectiveness of the English language curriculum and its alignment with professional demands in the workplace shows in Table 2. A significant majority of alumni agree that their ability to read English in the field of instrumentation is helpful for understanding texts related to their work environment (96.3% combined for "strongly agree" and "agree"). This suggests that the curriculum has been effective in developing reading comprehension skills. Similarly, the ability to write and speak English in professional contexts is also acknowledged by alumni as beneficial, with over 85% agreeing on its importance. However, the relatively lower percentage of "strongly agree" responses for writing (33.3%) and speaking (33.3%) indicates potential areas for further enhancement.

The integration of English into instrumentation courses is overwhelmingly viewed as important for career preparation, with 81.5% of respondents "strongly agreeing" and 14.8% "agreeing." However, there is a notable concern about the alignment of the current English syllabus with professional needs. While 77.7% of alumni believe the syllabus supports effective communication in professional environments, 22.2% express dissatisfaction, with 11.1% "strongly disagreeing" that it meets workplace demands. This suggests that the syllabus might benefit from a more tailored focus on practical and industry-specific communication skills. Confidence in using English in professional contexts also indicates room for improvement.

While 83% of alumni expressed confidence in using English in professional settings, 14.8% remained uncertain, potentially highlighting gaps in oral communication or situational application training. Furthermore, the frequency of using English reading materials in the workplace appeared limited, as only 33.3% "strongly agree" and 44.4% "agree" that they often rely on such resources.

Notably, 74.1% of alumni strongly believed that improvements or adjustments to the English syllabus are necessary to better prepare students for the demands of the workplace.

Despite generally positive responses, three questionnaire items recorded small percentages in the "strongly disagree" category, which require further attention. Specifically, 3.7% of respondents strongly disagreed that the ability to speak English taught in class was helpful in understanding work-related texts. Similarly, 3.7% strongly disagreed that English materials aligned with practical needs in daily workplace activities, and 11.1% strongly disagreed that the current syllabus supports effective communication in professional environments. These results, although minimal, highlight areas where curriculum enhancements should prioritize addressing practical applications, professional writing, and oral communication skills tailored to industry-specific requirements.

**Table 2.** The summary of alumni' responses

Questions	Respondent's Answer			
	strongly agree	agree	disagree	strongly disagree
The ability to read English in the field of instrumentation taught in class is very helpful in understanding texts related to the work environment.	44.4%	51.9%	3.7%	0%
The ability to speak English in the field of instrumentation taught in class is very helpful in understanding texts related to the work environment.	33.3%	48.1%	14.8%	3.7%
The ability to write English in the field of instrumentation taught in class helps in understanding texts related to the work environment.	33.3%	51.9%	14.8%	0%
The English courses that I took in the instrumentation study program are relevant to the demands of the profession.	37%	51.9%	11.1%	0%
Integration of English in instrumentation courses is important for future career preparation.	81.5%	14.8%	3.7%	0%
The current English course syllabus is in accordance with the needs for effective communication in a professional environment in the field of instrumentation.	33.3%	44.4%	11.1%	11.1%
The English material taught is in accordance with practical needs in daily activities in the work environment.	18.5%	63%	14.8%	3.7%
I feel confident in using English in professional situations or in a work environment.	22.2%	83%	14.8%	0%
I often use English material in the work environment.	33.3%	44.4%	22.2%	0%
There needs to be an improvement or adjustment to the English course syllabus to better support preparation in the work environment.	74.1%	25.9%	0%	0%

### Emerging Gaps Between English Proficiency And Professional Demands

The result from these responses from both students and alumni highlights critical insights that may reveal the gap between academic English proficiency and professional demands in the field of instrumentation. These findings serve to address the dual objectives of identifying current gaps in English proficiency and proposing actionable improvements for the curriculum. From the student responses, it is evident that while foundational skills in English, such as understanding instructions and using learning materials, are rated favorably, there is a notable gap in higher-order language skills. For instance, the ability to write in English with proper structure and express

opinions fluently in a professional context lag behind other metrics. This suggests that while the current syllabus has been considered providing a solid foundation, it does not seem to prepare students sufficiently for more nuanced demands of communicative competence they will face in a professional environment.

Similarly, alumni responses emphasize the critical role of English in their professional lives, particularly in reading and interpreting technical materials and integrating English into instrumentation tasks. However, the perceived inadequacies in the syllabus' relevance to practical needs and confidence in professional communication underscore the disconnect between academic preparation and workplace requirements. Scenarios requiring frequent use of English literature or advanced technical documentation, which are less common during academic training, accentuate this gap even more.

These findings underscore the importance of revisiting and revising the curriculum to better align with industry-specific language demands. Effective English instruction in vocational and technical education should be tailored to meet the linguistic and communicative needs of specific professional domains (Changpueng & Pattanapichet, 2023; Syakur, Zainuddin, & Hasan, 2020). Integrating skills such as technical report writing, professional presentations, and collaborative communication into the curriculum can significantly enhance learners' readiness for workplace challenges (Al-Malki et al., 2022). Furthermore, studies emphasize that curriculum development must incorporate feedback from stakeholders, including alumni and industry professionals, to ensure that learning materials and instructional approaches remain relevant to contemporary workplace requirements (Park, 2021; Pratami, Rizal, & Haryanto, 2021). By adopting this needs-based approach, institutions can bridge existing gaps between academic preparation and professional expectations, fostering graduates who are both linguistically competent and industry-ready.

## CONCLUSION

This study reports a case study which aim to identify English language learning experience from the current students, to identify the impact of the English language learning experience from the alumni and to examine potential gaps regarding the English proficiency in relation with the demands of academic and professional field. The findings revealed that while students possess adequate foundational English skills, they face challenges in applying higher-order language abilities, such as technical writing and verbal communication. Similarly, alumni respondents acknowledged the importance of English proficiency in their careers but expressed concerns regarding the syllabus' relevance to workplace demands, particularly in addressing practical and industry-specific communication tasks. The third research question sought to examine the gaps between students' and alumni's English proficiency and the demands of academic and professional fields. The findings identified several critical gaps, particularly in higher-order language skills, including technical writing, oral presentations, and situational communication. While students demonstrated confidence in understanding instructions and engaging with course materials, their ability to produce written reports and deliver professional presentations remained insufficient to meet workplace expectations. Alumni feedback further highlighted that the current syllabus lacks emphasis on industry-specific applications, such as drafting technical documents, communicating data interpretations, and participating in collaborative discussions. These gaps suggest that the existing curriculum primarily focuses on general English competence rather than addressing specialized language functions required in professional contexts. As a result, graduates may struggle with effectively translating theoretical knowledge into practical workplace communication. Addressing these shortcomings requires targeted curriculum revisions that incorporate applied language training, project-based learning, and simulated workplace scenarios to enhance students' preparedness for real-world demands. Institutions can measure the successful implementation of a revised curriculum by employing a combination of qualitative and

quantitative methods. For example, alumni surveys and employer feedback can provide valuable insights into how well graduates perform in professional environments. Additionally, tracking graduate outcomes, such as employment rates, workplace performance reviews, and career progression, can serve as key indicators of curriculum effectiveness. Implementing periodic assessments, such as industry-relevant proficiency tests or simulated workplace tasks, can also help evaluate whether students are meeting the desired professional standards. Continuous monitoring and adjustment based on this data will ensure the curriculum remains responsive to evolving industry demands and effectively prepares students for their careers. The expected impact of the curriculum revision on students' career readiness over the next five years includes a significant enhancement in their ability to meet professional demands effectively. By integrating applied language training and industry-relevant modules, graduates will be better equipped to handle tasks such as technical documentation, professional communication, and collaborative projects in global work environments. This alignment with industry standards is anticipated to increase graduates' employability and competitiveness in the job market. Furthermore, longitudinal tracking of alumni performance and feedback from employers will provide critical insights into the success of these revisions, enabling continuous refinement of the syllabus to adapt to evolving workplace requirements. In the long term, this proactive approach will position State Vocational Institute A as a leading institution in producing professionals with robust linguistic and technical competencies tailored to the demands of meteorology, climatology, and geophysics.

Future syllabus development should consider prioritizing creating modules that simulate authentic professional scenarios, allowing students to practice English in contexts that mirror their future workplaces. Incorporating case studies, project-based learning, and simulations related to meteorology, climatology, and geophysics may be a viable option which can provide a deeper engagement with field-relevant vocabulary and scenarios, and enhance the overall effectiveness of language training. Additionally, implementing continuous learning support, such as online resources, workshops, and alumni mentorship programs, could further enrich students' linguistic competence. Future research could explore the longitudinal impact of these syllabus changes on graduates' career readiness and effectiveness in professional communication within their field. Monitoring and analyzing the success of these enhancements over time will help refine the syllabus further so as to align with evolving industry needs and standards.

## References

- Aizawa, I., Rose, H., Thompson, G., & Curle, S. (2023). Beyond the threshold: Exploring English language proficiency, linguistic challenges, and academic language skills of Japanese students in an English medium instruction programme. *Language Teaching Research*, 27(4), 837-861.
- Al-Malki, E. A. A., Javid, C. Z., Farooq, M. U., Algethami, G. F., & Al-Harathi, A. A. (2022). Analysis of the English language needs of the Saudi tourism workforce: A first step into designing ESP teaching materials. *International Journal of Learning, Teaching and Educational Research*, 21(2), 72-88.
- Alabi, A. T., & Jelili, M. O. (2023). Clarifying likert scale misconceptions for improved application in urban studies. *Quality & Quantity*, 57(2), 1337-1350.
- Alordiah, C. O., & Ossai, J. N. (2023). Enhancing Questionnaire Design: Theoretical Perspectives on Capturing Attitudes and Beliefs in Social Studies Research. *International Journal of Innovative Science and Research Technology*, 8(10).
- Aprianto, D. (2020). Need Analysis in English Language Learning (ELL) Curriculum Developments. *Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP*, 3(2), 58-69.
- Čegar, B., Šipetić Grujičić, S., Bjekić, J., Vuksanović, A., Bojanić, N., Bartolović, D., . . . Zeković, M. (2023). Understanding the male perspective: Evaluating quality of life and psychological distress in Serbian men undergoing infertility treatment. *Life*, 13(9), 1894.
- Changpueng, P., & Pattanapichet, F. (2023). A needs analysis of English for meeting lessons for Thai undergraduate Engineering students. *LEARN Journal: Language Education and Acquisition Research Network*, 16(2), 603-623.

- Chiu, W.-Y., Liu, G.-Z., Barrett, N. E., Liaw, M.-L., Hwang, G.-J., & Lin, C.-C. (2023). Needs analysis-based design principles for constructing a context-aware English learning system. *Computer Assisted Language Learning*, 36(1-2), 176-204.
- Choudhary, G. (2024). Code-Switching Unveiled: A Comprehensive Analysis in Bilingual Education. *International Journal of Linguistics Applied Psychology and Technology (IJLAPT)*, 1(3 (July)).
- Ekayati, R., Manurung, I. D., & Yenni, E. (2020). Need analysis of esp for non-English study program. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 4(2), 322-332.
- Filgona, J., Sakiyo, J., Gwany, D., & Okoronka, A. (2020). Motivation in learning. *Asian Journal of Education and social studies*, 10(4), 16-37.
- Hohmann, E., Cote, M. P., & Brand, J. C. (2018). Research pearls: expert consensus based evidence using the Delphi method. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 34(12), 3278-3282.
- Hutchinson, T., & Waters, A. (1992). *English for Specific Purposes: A Learning Centered Approach*: Cambridge University Press.
- Lertchalermtipakoon, P., Wongsunbun, U., & Kawinkoonlasate, P. (2021). Need Analysis: English Language Use by Students in the Tourism and Hospitality and Industry. *English Language Teaching*, 14(3), 59-71.
- Maruf, N., Desembrianita, E., & Husain, D. H. (2021). Identifying ESP course materials for students of magister management: A needs analysis. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 4(3), 5773-5788.
- Owens, A., & Hite, R. (2022). Enhancing student communication competencies in STEM using virtual global collaboration project based learning. *Research in Science & Technological Education*, 40(1), 76-102.
- Pambudi, N. A., & Harjanto, B. (2020). Vocational education in Indonesia: History, development, opportunities, and challenges. *Children and Youth Services Review*, 115, 105092.
- Park, E. J. (2021). Affordances and Challenges of Mixed-Methods Needs Analysis for the Development of ESP Courses. *Language Teaching Research Quarterly*, 23, 12-22.
- Pranoto, B. E., & Suprayogi, S. (2020). A need analysis of ESP for physical education students in Indonesia. *Premise: Journal of English Education*, 9(1), 94-110.
- Pratami, W. G., Rizal, S., & Haryanto, E. (2021). Need Analysis on English for Specific Purposes of Marketing Major Students. *Jadila: Journal of Development and Innovation in Language and Literature Education*, 2(1), 101-115. doi:10.52690/jadila.v2i1.187
- Ramírez-Castañeda, V. (2020). Disadvantages in preparing and publishing scientific papers caused by the dominance of the English language in science: The case of Colombian researchers in biological sciences. *PloS one*, 15(9), e0238372.
- Roman, T. A., Brantley-Dias, L., Dias, M., & Edwards, B. (2022). Addressing student engagement during COVID-19: Secondary STEM teachers attend to the affective dimension of learner needs. *Journal of Research on Technology in Education*, 54(sup1), S65-S93.
- Syakur, A., Zainuddin, H., & Hasan, M. A. (2020). Needs analysis English for specific purposes (esp) for vocational pharmacy students. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 3(2), 724-733.
- Thepseenu, B. (2020). Needs Analysis for ESP Course Development: Thai Civil Engineering Students' Perspectives. *Asian Journal of Education and Training*, 6(3), 433-442.
- Trujeque-Moreno, E. E., Romero-Fernández, A., Esparragoza-Barragán, A., & Villa-Jaimes, C. J. (2021). Needs Analysis in the English for Specific Purposes (ESP) Approach: The Case of the Benemérita Universidad Autónoma de Puebla. *Mextesol Journal*, 45(2), n2.