

# Addressing Learning Barriers in Gregg Shorthand and Machine Shorthand Mastery: Enhancing Educational Quality for BSOA Students

## ABSTRACT

Shorthand remains a fundamental competency in office administration. Despite its significance, many students struggle to master both Gregg Shorthand and Machine Shorthand, which are essential for developing speed, accuracy, and efficiency in transcription. These challenges often lead to decreased confidence, lower academic performance, and limited practical application of skills, underscoring the need to examine the barriers to mastery in these areas. The primary objective of this study was to identify and analyze the learning barriers experienced by second- and third-year Bachelor of Science in Office Administration (BSOA) students at Bohol Island State University–Candijay Campus. Specifically, the study aimed to assess the extent of difficulties students face across four domains: cognitive and learning difficulties; skills and technical challenges; learning resources and environment; and institutional and curriculum-related barriers. A descriptive-quantitative research design was utilized. The research instrument combined an enhanced survey questionnaire adapted from Capistrano's (2021) study with a researcher-developed questionnaire tailored to shorthand learning. The final instrument was administered to 141 student-respondents. Data analysis used percentages and weighted means to assess the severity of barriers across the identified domains. Findings indicated that skills and technical difficulties (WM = 3.21) constituted the most significant challenge, particularly in maintaining consistent shorthand strokes, ensuring accuracy, and operating the steno machine. Cognitive and learning difficulties (WM = 2.97), such as symbol retention, comprehension of shorthand rules, and sustained focus, followed. Institutional and curriculum-related barriers (WM = 2.87) and learning resources and environment (WM = 2.82) were also identified, reflecting issues such as outdated instructional materials, limited practice opportunities, and insufficient laboratory facilities. In conclusion, the study demonstrates that mastery of shorthand is hindered by a combination of technical, cognitive, institutional, and environmental factors. Addressing these barriers through enhanced teaching strategies, adequate facilities, and curriculum improvements is vital for strengthening shorthand education and improving academic outcomes for BSOA students.

**Keywords:** Candijay, Bohol, Descriptive research design, Gregg Shorthand, Machine Shorthand, Office Administration

## INTRODUCTION

Mastery of shorthand and stenography is essential for Bachelor of Science in Office Administration (BSOA) students, as these competencies improve efficiency in transcription, documentation, and professional communication. However, many students encounter challenges with Gregg and machine shorthand, including difficulties in listening, symbol recognition, cognitive overload, and insufficient learning tools and facilities. These obstacles impede the attainment of proficiency and confidence in shorthand. The present study aims to examine the cognitive, technical, and institutional factors influencing mastery of Gregg Shorthand and Machine Shorthand, with the objective of enhancing educational quality for BSOA students.

In the study conducted by Al-Khresheh (2020), Saudi EFL students were found to experience significant difficulties during the perception, parsing, and utilization stages of listening comprehension. These challenges are relevant to stenography learning, as accurate listening is essential for converting spoken language into written shorthand.

Related to this, Padilla et al. (2020) discussed the limitations of deep-learning systems in Gregg shorthand-to-English conversion, emphasizing that variability in handwriting styles reduces recognition accuracy. This finding highlights the complexity of shorthand writing and transcription, where consistency and accuracy are critical. Similarly, Ibrahim (2021) found that students struggled to develop sufficient writing speed in Gregg shorthand because of the need to recall symbols automatically during rapid dictation. Without regular drills and timed transcription exercises, learners failed to achieve fluency and accuracy.

In the Philippine context, Valiente (2024) reported that many BSOA students demonstrated only moderate practical performance in machine shorthand. This was attributed to limited hands-on practice, inadequate instructional materials, and difficulties in striking speed and symbol recognition, all of which negatively affected transcription accuracy. Supporting this, Jintalan (2024) developed and tested a machine shorthand textbook for BSOA students and found that curriculum-aligned materials improved acceptability and reduced student confusion, suggesting that appropriate textbooks can help mitigate learning barriers. Additionally, Bufete et al. (2025) found that Filipino BSOA students encountered challenges, including unfamiliar dictation words, lack of focus, and poor penmanship, which hindered mastery of shorthand.

Capistrano et al. (2021) further explored the challenges faced by BSOA students in learning stenography, particularly in transcription, speed, and comprehension. Their study emphasized the importance of mastering shorthand rules and possessing strong English language skills, including grammar, vocabulary, spelling, and punctuation. Without these foundational competencies, students were more likely to struggle with accurate transcription under time pressure. Likewise, Valiente (2022) assessed machine shorthand performance among BSOA students and found that while theoretical knowledge was adequate, practical performance remained only moderately satisfactory, indicating the need for improved instructional strategies and customized learning resources.

Learning Gregg shorthand is particularly challenging due to its unique symbols and abbreviations, and similar difficulties have been reported among students at BISU-Candijay Campus. Preliminary interviews indicated that many students struggled to master both Gregg and machine shorthand. Therefore, this study focuses on second-year and third-year Bachelor of Science in Office Administration (BSOA) students at Bohol Island State University-Candijay Campus to gain deeper insights into the specific learning barriers they face. Identifying these challenges is crucial for improving shorthand instruction and preparing students for the requirements of contemporary administrative work.

## OBJECTIVES

The primary goal of this study is to examine the learning barriers in Gregg and machine shorthand to enhance educational quality of second-year and third-year BSOA Students at BISU-Candijay campus during the academic year 2024-2025. Specifically, the study aimed to answer the following questions: 1.) What is the demographic profile of the respondents in terms of: age, sex, civil status, and year level ?; 2.) What are the students' perceptions of the learning barriers in mastering Gregg Shorthand and machine shorthand operation in terms of: cognitive and learning difficulties, skills and learning challenges, learning resources and environment, and

institutional and curriculum-related barriers? 3.) Based on the findings, what action plan may be proposed?

## **RESEARCH METHODOLOGY**

### **Research Design**

This study utilized the descriptive–research design method using a combination of researcher-made survey questionnaire and enhance survey questionnaire.

### **Research Environment**

This study was conducted at Bohol Island State University – Candijay Campus, located at Barangay Cogtong, Candijay, Bohol. BISU–Candijay Campus provided a conducive academic environment, with classrooms and other facilities that supported the conduct of the study.

### **Research Respondents**

The study involved 141 BSOA students, comprising 75 second-year and 66 third-year students. The second-year students had recently started their experience with Machine Shorthand and had prior exposure to Gregg Shorthand, while the third-year students had experienced both Gregg Shorthand and Machine Shorthand in their coursework.

The researchers employed Total Enumeration as the sampling technique; hence, all second-year and third-year BSOA students were included in the study. This approach ensured comprehensive feedback from the entire relevant population. Second-year students were selected because they had recent experience with Gregg Shorthand and were currently learning Machine Shorthand, while third-year students were chosen for their broader exposure to both shorthand systems throughout their academic years.

### **Research Procedure**

*Data Gathering.* To ensure ethical compliance, the researchers secured approval through a transmittal letter noted by the research adviser and approved by the Campus Director, followed by a formal request addressed to the Registrar of Bohol Island State University – Candijay Campus. Relevant literature and related studies were reviewed to support the development of the research instrument. The questionnaire was then validated by the research adviser to ensure its accuracy, clarity, and consistency with the objectives of the study.

The finalized survey questionnaire was administered through Google Forms and disseminated to selected second- and third-year BSOA students with the assistance of class mayors to encourage maximum participation and accessibility. After the completion of data gathering, the responses were retrieved, tabulated, and organized for analysis. Ethical standards were strictly observed throughout the study by ensuring voluntary participation, confidentiality of responses, and secure handling of all collected data.

*Statistical Treatment.* To analyze the data gathered from the respondents, the following statistical tools were applied: 1.) To quantify the responses regarding the learning barriers to mastering Gregg Shorthand and Machine Shorthand among second- and third-year BSOA students at Bohol Island State University – Candijay Campus, the percentage formula was used. 2.) To determine the level of barriers experienced by the respondents in learning Gregg Shorthand and Machine Shorthand, the weighted mean was used.

With regard to the learning barriers encountered in Gregg Shorthand and Machine Shorthand, the following scale was adopted:

<b>Rating Scale</b>	<b>Category Response</b>	<b>Interpretation</b>
4	Strongly Agree (SA)	Clearly experiences the barrier and considers it a significant challenge in learning Gregg shorthand and machine shorthand.
3	Agree (A)	Somewhat experiences the barrier and considers it a noticeable concern in the learning process.
2	Disagree (D)	Rarely experiences the barrier and considers it only a minor or occasional issue.
1	Strongly Disagree (SD)	Does not experience the barrier and sees no challenge in the area of learning.

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## RESULTS AND DISCUSSIONS

This section presents, analyzes, and interprets data collected from respondents for the study entitled “Addressing Learning Barriers in Gregg Shorthand and Steno Machine Mastery: Enhancing Educational Quality for BSOA Students.” It includes demographic profiles of the respondents and examines the challenges encountered in learning Gregg shorthand and using the steno machine. Barriers are categorized as cognitive, environmental, institutional, and technical to provide a comprehensive overview of factors impeding mastery. Data are presented using tables and figures, which are further explained through descriptive analysis and interpretation. This approach facilitates a deeper understanding of the issues students encounter and enables the connection of demographic factors to the identified challenges.

### Profile of the Respondents

This section presents the demographic profile of the respondents, highlighting important variables such as age, sex, civil status, and year level. The data were gathered from 141 participants to provide a clearer understanding of the population under study and the personal characteristics that may influence their learning experiences in mastering Gregg and machine shorthand. The information is organized and summarized in Table 1 to identify possible patterns and relationships between the respondents’ profiles and the learning barriers they encountered.

**Table 1**  
**Profile of the Respondents**  
(n = 141)

Profile of the Respondents		f	%
Age group	17-19 yo	4	2.84
	20-25 yo	132	93.63
	26-29 yo	3	2.13
	30 yo and above	2	1.42
Civil Status	Single	139	98.58
	Married	2	1.420
Sex	Female	112	79.43
	Male	29	20.57
Year Level	Second Year	75	53.19
	Third Year	66	46.81
<b>Total</b>		<b>141</b>	<b>100</b>

Most respondents were 20–25 years old (93.62%), predominantly female (79.43%), and mainly single (98.58%). In terms of year level, second-year students comprised 53.19% of the respondents, while third-year students accounted for 46.81%, showing a relatively balanced distribution between the two groups. This demographic profile indicates that the respondents were primarily young adult students actively engaged in the BSOA program and in the process of developing their Gregg shorthand and machine shorthand competencies.

The profile suggests that the respondents are generally young, academically focused, and at an active stage of skill acquisition. As such, challenges in mastering Gregg and machine shorthand are less likely to be influenced by demographic characteristics alone and are more likely associated with factors such as listening ability, symbol recognition, learning resources, practice opportunities, and instructional support.

This finding aligns with the study of Gogol et al. (2021), which emphasized that younger learners tend to demonstrate stronger cognitive flexibility and faster retention of symbols and patterns essential in shorthand mastery. Similarly, Dag-um et al. (2024), highlighted that students with fewer external responsibilities are often more capable of concentrating on academic and technical skill development. These findings suggest that effective learning in Gregg and machine shorthand depends not only on students’ demographic characteristics but also on the adequacy of instructional materials, guided practice, and institutional learning support.

### Learning Barriers in Gregg Shorthand and Machine Shorthand Mastery

This section examines the learning barriers students face in mastering Gregg and machine shorthand, focusing on their perceptions of difficulties in developing accuracy, speed

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, and comprehension in both Gregg shorthand writing and machine shorthand transcription. Challenges are explored in the areas of cognitive and learning difficulties, technical skills and performance, availability of learning resources, and institutional support. These barriers highlight obstacles to mastery and underscore the need to enhance educational quality by improving teaching strategies, providing adequate resources, and fostering supportive learning environments for BSOA students.

### Cognitive and Learning Difficulties

This part presents the challenges encountered by students in their cognitive and learning processes while studying Gregg and machine shorthand. The results reflect students' experiences with difficulties such as mental exhaustion, fast writing demands, symbol retention, and maintaining focus during shorthand activities. The data is systematically organized and summarized in Table 2 to provide a clear overview of the common barriers affecting students' learning and skill development in shorthand transcription and writing.

The section also aims to identify the major cognitive and learning factors that influence students' performance and mastery of Gregg and machine shorthand. By examining how these challenges affect concentration, memory retention, comprehension, and writing accuracy, the analysis provides valuable insights into the difficulties students face in acquiring shorthand competencies. This examination further highlights the relationship between cognitive demands and students' ability to effectively learn and apply shorthand skills, serving as a basis for recommendations that may improve instructional strategies, learning support, and overall student performance.

**Table 2**  
**Cognitive Learning Difficulties**  
(n = 141)

Indicators	Weighted Mean	Description
1 I struggle to write shorthand symbols quickly.	3.10	Agree
2 I find it difficult to understand symbols with their sounds.	3.03	Agree
3 I feel mentally confused when learning new Gregg shorthand rules.	2.99	Agree
4 I often forget Gregg shorthand symbols after learning.	2.96	Agree
5 I lose focus during the classes.	2.79	Agree
<b>Sub-compositeMean</b>	<b>2.79</b>	<b>Agree</b>

In terms of cognitive and learning difficulties, the aggregate weighted mean of 2.97, interpreted as Agree, indicates that the 141 respondents generally experienced challenges in learning Gregg and machine shorthand. This overall mean suggests that students commonly encounter difficulties related to fast writing, symbol recognition, mental processing, memory retention, and concentration during shorthand classes. The close range of items further reflects that these learning barriers are consistently experienced among the respondents.

The findings imply that mastering Gregg and machine shorthand requires not only technical writing ability but also strong cognitive skills such as focus, memory retention, and rapid information processing. Since shorthand involves listening, interpreting sounds, recalling symbols, and writing quickly at the same time, students may become mentally overwhelmed, particularly when lessons progress rapidly or when practice opportunities are limited. These challenges may affect students' confidence and overall performance in shorthand courses.

Recent studies support the idea that shorthand and transcription-related skills place significant cognitive demands on learners. Gogol et al. (2021), emphasized that shorthand mastery requires cognitive flexibility, rapid symbol recognition, and continuous memory recall, which may become difficult for students who lack sufficient guided practice. Similarly, Valiente (2024), highlighted that inadequate practice opportunities, limited access to learning materials, and insufficient hands-on training contribute to students' difficulty in developing shorthand proficiency and transcription accuracy. These findings

suggest that the difficulties experienced by students are influenced not only by the complexity of shorthand itself but also by the adequacy of instructional support and learning strategies provided during training.

The top three highest indicators were struggling to write shorthand symbols quickly ( $\bar{x} = 3.10$ ), difficulty understanding symbols with their sounds ( $\bar{x} = 3.03$ ), and feeling mentally confused when learning new Gregg shorthand rules ( $\bar{x} = 2.99$ ). These findings indicate that students experience greater difficulty in tasks requiring speed, symbol-sound association, and

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comprehension of new shorthand principles. This suggests that learners may struggle to simultaneously process auditory information, recall symbols, and apply shorthand rules within a limited time frame.

On the other hand, the lowest indicators, though still interpreted as Agree, were often forgetting Gregg shorthand symbols after learning ( $\bar{x} = 2.96$ ) and losing focus during classes ( $\bar{x} = 2.79$ ). This implies that while memory retention and concentration remain concerns among students, they are relatively less challenging compared to writing speed and symbol interpretation. Nevertheless, these factors may still affect students' consistency in mastering shorthand skills, especially when lessons require sustained attention and continuous practice.

### Skills and Technical Difficulties

This part presents the challenges encountered by students in terms of their skills and technical performance while studying Gregg and machine shorthand. The results reflect students' experiences with difficulties such as machine shorthand operation, transcription accuracy, writing speed, and maintaining consistent shorthand strokes. The data is systematically organized and summarized in Table 3 to provide a clear overview of the common technical barriers affecting students' skill development and performance in shorthand writing and transcription.

The section also aims to identify the major skill-based and technical factors that influence students' proficiency in Gregg and machine shorthand. By examining how these challenges affect speed writing, accuracy, symbol production, and machine usage, the analysis provides valuable insights into the difficulties students face in developing shorthand competencies. This examination further highlights the relationship between technical skill demands and students' ability to effectively perform shorthand tasks, serving as a basis for recommendations that may improve hands-on training, instructional support, and overall student performance in shorthand subjects.

**Table 3**  
**Skills and Technical Difficulties**  
**(n=141)**

Indicator	Weighted Mean	Description
1	3.28	I struggle with using the machine shorthand. Strongly Agree
2	3.25	I make a lot of mistakes when writing spoken words into Gregg shorthand. Agree
3	3.23	My transcription speed is too slow. Agree
4	3.18	I find it hard to maintain consistent Gregg shorthand strokes. Agree
5	3.09	I find it hard to write Gregg shorthand symbols quickly. Agree
<b>Sub-composite Mean</b>	<b>3.21</b>	<b>Agree</b>

In terms of skills and technical difficulties, the aggregate weighted mean of 3.21, interpreted as Agree, indicates that the 141 respondents generally experience challenges in mastering Gregg and machine shorthand. This overall mean suggests that students commonly encounter difficulties in using machine shorthand, writing spoken words accurately, maintaining transcription speed, and producing consistent and fast shorthand strokes. The relatively close range of items further reflects that these technical barriers are consistently experienced among the respondents.

The findings imply that mastering Gregg and machine shorthand requires not only theoretical understanding but also strong psychomotor and technical skills such as speed writing, accuracy, and stroke consistency. Since shorthand involves rapid transcription under time pressure, students may struggle with coordination and fluency, particularly when practice is limited or when they are still developing familiarity with shorthand systems. These challenges may affect students' performance efficiency and overall confidence in transcription tasks. According to Gogol et al. (2021), shorthand mastery requires sustained cognitive engagement, rapid symbol recognition, and continuous motor-cognitive coordination, which are developed through consistent guided practice.

The results are also consistent with the idea that shorthand learning is a skill-intensive process that demands continuous practice and repetition. When students lack sufficient exposure and hands-on exercises, their ability to develop speed and accuracy becomes limited, resulting in frequent errors and slow transcription output. This highlights the importance of structured drills and guided practice in improving shorthand proficiency. In support of this, Pinet et al. (2022) emphasized that motor-skill automatization is achieved

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through distributed and repetitive practice, where sustained drills significantly enhance speed writing and transcription fluency over time.

The highest indicator was struggling with using machine shorthand ( $\bar{x} = 3.28$ ), followed by making mistakes when writing spoken words into Gregg shorthand ( $\bar{x} = 3.25$ ), and having slow transcription speed ( $\bar{x} = 3.23$ ). These findings indicate that students experience greater difficulty in the actual application of machine shorthand and in accurately translating spoken language into shorthand symbols. This suggests that learners may still be in the early stages of skill acquisition where accuracy and speed have not yet been fully developed. This is supported by Valiente (2022), who found that limited access to stenographic equipment, insufficient instructional materials, and inadequate practice opportunities significantly hinder students' development of transcription accuracy and speed.

On the other hand, the lowest indicators, though still interpreted as Agree, were difficulty maintaining consistent Gregg shorthand strokes ( $\bar{x} = 3.18$ ) and difficulty writing Gregg shorthand symbols quickly ( $\bar{x} = 3.09$ ). This implies that while consistency and speed remain challenges among students, they are relatively less severe compared to overall machine usage and transcription accuracy. Nevertheless, these factors still contribute to students' overall difficulty in achieving proficiency in shorthand writing and may require continued practice and reinforcement. As noted by Pinet et al. (2022), sustained and structured repetition remains essential in improving writing fluency and developing automaticity in skill-based tasks such as shorthand.

### Learning Resources and Environment

This part presents the challenges encountered by students in terms of their learning resources and environment while studying Gregg and machine shorthand. The results reflect students' experiences with difficulties such as inadequate classroom conditions, lack of laboratory facilities, limited access to audio dictation materials, insufficient practice time, and scarcity of learning materials. The data is systematically organized and summarized in Table 4 to provide a clear overview of the common environmental and resource-related barriers affecting students' learning and practice in shorthand transcription and writing.

The section also aims to identify the major resource and environmental factors that influence students' performance in Gregg and machine shorthand. By examining how these challenges affect practice opportunities, skill development, and exposure to instructional materials, the analysis provides valuable insights into the difficulties students face in mastering shorthand competencies. This examination further highlights the relationship between learning environment constraints and students' ability to effectively practice and apply shorthand skills, serving as a basis for recommendations that may improve classroom facilities, access to learning resources, and overall instructional support.

**Table 4**  
**Learning Resources and Environment**  
**(n=141)**

Indicator	Weighted Mean	Description
1	2.99	The classroom setting makes it hard for me to practice shorthand effectively.
2	2.87	Lack of laboratory facility for machine shorthand mastery.
3	2.86	Audio dictation materials are not available for machine shorthand practice.
4	2.79	Lack of enough practice time in Gregg shorthand writing.
5	2.60	There are insufficient learning materials for Gregg shorthand and machine shorthand lessons (e.g. Steno Machine,

books).

<b>Sub-composite Mean</b>	<b>2.82</b>	<b>Agree</b>
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In terms of learning resources and environment, the aggregate weighted mean of 2.82, interpreted as Agree, indicates that the 141 respondents generally experience challenges related to inadequate learning resources and environmental conditions in studying Gregg and machine shorthand. This overall mean suggests that students commonly encounter difficulties in classroom settings, availability of laboratory facilities, access to audio dictation materials, sufficient practice time, and adequacy of instructional resources such as steno machines and books. The relatively close range of item

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means further reflects that these resource and environment-related barriers are consistently experienced among the respondents.

The findings imply that effective mastery of Gregg and machine shorthand is not only dependent on individual skill but also on the availability of proper learning environments and instructional support. Since shorthand is a highly skill-based subject that requires constant practice, students may struggle to develop proficiency when classroom conditions are not conducive to concentration and when practice tools are limited. These constraints may negatively affect students' engagement, practice consistency, and overall skill development in shorthand transcription. According to Hanaysha (2023) and Liu et al. (2022), classroom environment and institutional facilities significantly influence student engagement, concentration, and academic performance, particularly in courses that require sustained attention and hands-on practice.

The results are also consistent with the idea that access to adequate learning resources is essential in skill acquisition. When students lack exposure to functional equipment such as stenographic machines, audio dictation tools, and updated learning materials, their ability to reinforce skills becomes limited, resulting in slower progress and reduced accuracy. This highlights the importance of providing sufficient instructional materials and improving classroom infrastructure to support effective shorthand training. In support of this, Fadare (2020) emphasized that inadequate educational resources restrict opportunities for skill reinforcement, although students may attempt to cope through peer learning and self-practice.

The highest indicator was "*The classroom setting makes it hard for me to concentrate and practice shorthand effectively*" ( $\bar{x} = 2.98$ ), indicating that environmental conditions within the classroom are the most significant barrier experienced by students. This suggests that distractions, limited space, or unsuitable learning environments may hinder students' ability to focus during shorthand practice sessions. This is supported by Hanaysha (2023), who found that poor learning environments negatively affect students' motivation and attentional capacity, especially in skill-based learning contexts.

On the other hand, the lowest indicator was “*There are insufficient learning materials for Gregg shorthand and machine shorthand lessons (e.g., steno machine, books)*” ( $\bar{x} = 2.60$ ), though still interpreted as Agree. This implies that while students recognize the lack of materials as a challenge, it is perceived as less critical compared to classroom environment and practice time limitations. According to Fadare (2020), insufficient learning resources may hinder skill development, but learners can sometimes partially compensate through alternative learning strategies such as peer collaboration and independent practice. Nevertheless, these limitations still contribute to the overall difficulty in achieving proficiency in shorthand writing.

### **Institutional and Curriculum-Related Barriers**

This part presents the challenges encountered by students in terms of institutional and curriculum-related factors while studying Gregg and machine shorthand. The results reflect students’ experiences with difficulties such as limited instructional time, inadequate funding for stenographic machines, outdated course content, and lack of opportunities for real-life application. The data is systematically organized and summarized in Table 5 to provide a clear overview of the common institutional and curriculum-based barriers affecting students’ learning and skill development in shorthand transcription and writing.

The section also aims to identify the major institutional and curriculum-related factors that influence students’ performance in Gregg and machine shorthand. By examining how these challenges affect instructional delivery, access to learning tools, curriculum relevance, and practical application, the analysis provides valuable insights into the difficulties students face in mastering shorthand competencies. This examination further highlights the relationship between institutional support systems and students’ ability to effectively acquire and apply shorthand skills, serving as a basis for recommendations that may improve curriculum design, resource allocation, instructional time, and overall program effectiveness.

**Table 5**  
**Institutional and Curriculum-Related Barriers**  
**(n=141)**

<b>Indicator</b>	<b>Weighted Mean</b>	<b>Description</b>
<b>1</b>	3.06	Agree
<b>2</b>	2.99	Agree
<b>3</b>	2.99	Agree
<b>4</b>	2.67	Agree
<b>5</b>	2.67	Agree
<b>Sub-composite Mean</b>	<b>2.87</b>	<b>Agree</b>

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In terms of institutional and curriculum-related barriers, the sub-composite mean of 2.87, interpreted as Agree, indicates that the 141 respondents generally acknowledge institutional gaps and curriculum limitations as obstacles in learning Gregg and machine shorthand. This overall mean suggests that students commonly experience challenges related to limited instructional time, inadequate funding for stenographic tools, outdated course content, and insufficient opportunities for real-life application. The relatively close range of items further reflects that these institutional and curriculum-related barriers are consistently experienced among the respondents.

The findings imply that mastery of Gregg and machine shorthand is not only influenced by individual effort but is also strongly shaped by institutional support and curriculum design. Since shorthand is a skill-based discipline that requires consistent practice and real-world application, students may struggle to fully develop competence when opportunities for practical exposure are limited and when instructional resources are insufficient. These constraints may reduce students' engagement, skill reinforcement, and ability to connect classroom learning with actual transcription tasks. According to Ma'aji et al. (2020), inadequate practical exposure and insufficient funding for instructional tools significantly contribute to declining student competence and reduced interest in shorthand-related subjects.

The results also indicate that institutional investment and curriculum relevance play a crucial role in effective skill development. When educational institutions fail to provide updated learning materials, sufficient practice time, and functional equipment such as stenographic machines, students are less likely to achieve the level of fluency and accuracy required in shorthand practice. This highlights the importance of strengthening institutional support systems and ensuring that curriculum content aligns with current learning needs and practical applications. In support of this, Ogwang (2022) emphasized the need to continuously update course content and instructional tools while integrating hands-on experience to enhance meaningful learning outcomes.

The highest weighted means, both at 2.99, were for the statements *"The lack of opportunities to apply Gregg shorthand and machine shorthand in practical settings makes it difficult for me to connect lessons with real-life applications"* and *"The lack of funding for tools such as steno machines negatively affects my learning in Machine Shorthand."* These findings indicate that students are primarily hindered by the absence of real-world application opportunities and insufficient institutional funding for essential learning tools. This suggests that experiential learning and resource availability are critical factors in developing shorthand proficiency.

On the other hand, the lowest weighted mean of 2.62 was for the statement *"The course content feels less relevant because of outdated tools and learning materials,"* though still interpreted as Agree. This implies that while curriculum relevance is a concern, it is perceived as less critical compared to practical application and funding limitations. Nevertheless, outdated instructional materials still affect students' perception of course relevance and may reduce motivation over time. As emphasized by Ogwang(2022), updating curriculum content and improving instructional tools are essential to meet modern educational demands and enhance student learning outcomes.

### **Summary of Results in Learning Barriers in Gregg Shorthand and Machine Shorthand by Second Year and Third year BSOA Students**

Below, the table presents the summary of respondents' perceptions of the various learning barriers encountered in mastering Gregg Shorthand and Machine Shorthand.

**Summary of Results in Learning Barriers in Gregg Shorthand and Machine Shorthand by Second Year and Third year BSOA Students**

Indicator	Weighted Mean	Description
Skills and Technical Difficulties	3.21	Agree
Cognitive and Learning Difficulties	2.97	Agree
Institutional and Curriculum-related Barriers	2.87	Agree
Learning Resources and Environment	2.82	Agree
<b>Sub-composite Mean</b>	<b>2.97</b>	<b>Agree</b>

Table 6 summarizes the four major categories of learning barriers in mastering Gregg and machine shorthand. The overall mean of 2.97, interpreted as Agree, indicates that students generally experience challenges across cognitive, technical, environmental, and institutional dimensions of shorthand learning. These difficulties were commonly observed among the respondents and significantly affect their ability to achieve mastery in shorthand writing and transcription.

Among the four categories, Skills and Technical Difficulties obtained the highest mean of 3.21, indicating that practical application—including speed writing, transcription accuracy, and machine shorthand operation—posed the greatest challenge for students. This finding is supported by Eze and Oko (2023), who reported that insufficient technical training and limited exposure to machine shorthand equipment lead to poor performance and frequent transcription errors. Similarly, Tabe (2024) emphasized that speed and accuracy in shorthand are among the most difficult skills to develop, requiring consistent drills, structured practice, and immediate corrective feedback to achieve proficiency.

On the other hand, the lowest mean was observed in Learning Resources and Environment, with a weighted mean of 2.82, also interpreted as Agree. This suggests that while students recognize limitations in materials and facilities, they consider technical skill acquisition as a more pressing challenge. According to Fadare (2020), inadequate learning resources, outdated instructional materials, and insufficient laboratory facilities negatively affect student performance; however, these resource-related constraints are often perceived as secondary compared to the difficulties encountered in actual shorthand execution.

Meanwhile, Cognitive and Learning Difficulties obtained a weighted mean of 2.97, while Institutional and Curriculum-Related Barriers recorded a mean of 2.87, both interpreted as Agree. These findings indicate that students also experience notable challenges in mental processing, concentration, retention, instructional time, and curriculum relevance. This is consistent with Debrah (2022), who found that students in shorthand-related courses often struggle with memory retention, focus, and mental fatigue during transcription tasks. In addition, Ma'aji et al. (2020) highlighted that limited practical application opportunities and inadequate institutional support significantly hinder students' skill development and mastery.

In summary, the results reveal that although all four categories contribute to learning barriers in shorthand, the greatest challenge lies in skills and technical application, followed by cognitive and institutional factors. These findings emphasize the need for improved instructional strategies, enhanced hands-on training for both Gregg and machine shorthand, adequate learning facilities, and continuous curriculum enhancement to strengthen the effectiveness of shorthand education for BSOA students.

## CONCLUSION

This study revealed that Bachelor of Science in Office Administration students of Bohol Island State University – Candijay Campus, particularly second- and third-year students, generally experience moderate to considerable learning barriers in mastering Gregg and machine shorthand. These barriers are multifaceted, encompassing skills and technical difficulties, cognitive and learning challenges, learning resources and environmental constraints, and institutional and curriculum-related factors. Among these, skills and technical difficulties emerged as the most pronounced, indicating that students face greater challenges in the actual application of shorthand, particularly in speed writing, transcription accuracy, and machine shorthand operation.

Despite the presence of cognitive and environmental influences, the findings show that students' performance is most strongly affected by their limited exposure to hands-on practice and insufficient opportunities to develop technical fluency. Cognitive and learning

difficulties further hinder students' ability to process, retain, and consistently apply shorthand symbols, while inadequate learning resources and environmental conditions restrict effective practice and skill reinforcement. Moreover, institutional and curriculum-related barriers such as limited instructional time, outdated course content, and insufficient funding for stenographic equipment further compound these challenges and limit opportunities for mastery.

The findings highlight the need for stronger institutional support, improved access to functional learning resources, and enhanced instructional strategies that prioritize practical application and repetitive skill development. Addressing these barriers through updated curriculum design, improved laboratory facilities, and increased hands-on training opportunities is essential to strengthen students' competence in Gregg and machine shorthand. Ultimately, this study emphasizes that while students face challenges across multiple dimensions, the quality of training environment, availability of resources, and effectiveness of instructional delivery are critical determinants of their success in mastering shorthand skills.

## **RECOMMENDATIONS**

Based on the findings, it is recommended that Bohol Island State University – Candijay Campus strengthen its support for shorthand instruction by increasing hands-on training opportunities and providing more structured practice sessions focused on Gregg and machine shorthand. The university may also consider extending instructional time dedicated to shorthand subjects to ensure sufficient practice for the development of speed, accuracy, and transcription fluency.

Furthermore, the institution is encouraged to upgrade learning resources by providing adequate and updated shorthand materials, including functional steno machines, audio dictation tools, reference books, and improved laboratory facilities. Faculty members and program coordinators are also encouraged to enhance the learning environment by ensuring that classrooms and practice areas are conducive to focus, repetition, and skill development in shorthand transcription.

Additionally, the university may strengthen institutional support by allocating sufficient funding for the acquisition, maintenance, and modernization of shorthand equipment, as well as providing training programs for faculty to enhance their instructional strategies in both Gregg and machine shorthand. Continuous monitoring and evaluation of shorthand instruction should also be implemented to identify gaps and improve teaching effectiveness.

To address the identified barriers and enhance shorthand mastery among BSOA students, the following recommendations are presented:

1. Strengthen practical training by increasing hands-on practice sessions and structured drills focused on Gregg and machine shorthand skills to improve speed, accuracy, and transcription confidence.
2. Upgrade learning resources by providing adequate and updated shorthand materials, including functional steno machines, audio dictation tools, and well-equipped laboratory facilities to support effective skill development.
3. Enhance the learning environment by improving classroom conditions and establishing dedicated shorthand practice areas that are conducive to focus, repetition, and skill reinforcement.
4. Increase institutional support by allocating sufficient funding for the acquisition, maintenance, and modernization of shorthand equipment, as well as providing faculty training to enhance instructional effectiveness in both Gregg and machine shorthand.

Implementation of these recommendations is expected to foster a more supportive and effective learning environment, enabling BSOA students to overcome identified barriers and achieve greater proficiency in Gregg shorthand and machine shorthand skills.

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