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LEVEL OF MASTERY EXPERIENCE, VICARIOUS (SECONDHAND) EXPERIENCE, VERBAL PERSUASION AND PSYCHOLOGICAL RESPONSE AMONG DOCTORAL STUDENTS IN LIBRARY AND INFORMATION SCIENCE, SOUTH-WEST NIGERIA.

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Abstract
This study investigated the levels of mastery experience, vicarious experience, verbal persuasion, and psychological response among Doctoral students in Library and Information Science (LIS) in South-West Nigeria in other to assess how these self-efficacy indices relate to doctoral students' confidence and performance in thesis writing. Using a survey research design, primary data were collected from all 375 doctoral students across six public and private universities. A structured questionnaire, adapted to the LIS doctoral context, captured demographic information and self-efficacy across the four dimensions, rated on a four-point scale. Data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Findings revealed that Doctoral LIS students exhibit high levels of self-efficacy across all dimensions. Students reported confidence in applying prior academic achievements, learning from setbacks, and engaging persistently in research tasks. Psychological responses indicated strong resilience, with students effectively managing stress, maintaining focus, and converting anxiety into motivation. These results underscore the importance of mastery experiences, vicarious experience, verbal persuasion and psychological response as influencing factors towards effective thesis write-up and academic engagement among doctoral students in LIS programs.

Keywords: Mastery Experience, Vicarious Experience, Verbal Persuasion, Psychological Response, Doctoral Students, Library and Information Science, Nigeria

Introduction

In doctoral education, formative experiences and content mastery have been found to contribute to increased research self-efficacy beliefs among doctoral students (Pasupathy, 2018, Woo et al., 2024). These experiences provide students with the skills and confidence needed to navigate the complexities of doctoral research. Additionally, the balance between work, personal life, and psychological well-being plays a significant role in shaping self-efficacy. Haider and Dasti (2022) highlight the positive impact of mentoring on doctoral students' research self-efficacy, emphasizing its role in enhancing psychological well-being and work-life balance. Self-efficacy beliefs represent cognitive structures that significantly shape individual development, particularly in building research competence. For postgraduate students, it represents their personal judgment or confidence in their ability to successfully carry out academic research tasks (Olutoki and Osoba, 2024).

Research self-efficacy, an adaptation of Bandura's social cognitive theory, specifically addresses an individual's belief in their ability to engage in research-related activities (Stadtlander et al., 2020). A doctoral student is expected to be self-efficient. A self-efficient doctoral student possesses the confidence and ability to effectively

define and conduct research (Elballah et al., 2024). Self-efficacy has been identified as one of the strongest predictors of successful engagement in research activities (Livinți et al., 2021). It encompasses the belief in one's ability to carry out tasks such as conducting literature reviews, collecting and analyzing data, and writing reports or essays (Fokkens-Bruinsma et al., 2021). As such, it is a key determinant of success in research, influencing both motivation and engagement in academic endeavors. Hence, high self-efficacy enhances confidence, interest, and attentiveness in tasks, enabling students to tackle academic responsibilities with resilience and determination (Bandura, 2001; Olodude et al., 2020).

Grounded in social cognitive theory, self-efficacy influences students' decisions to engage in activities, the effort they invest, and their persistence in overcoming obstacles (Beharu, 2018; Alay & Triantoro, 2013). It is a key predictor of academic performance, research engagement, and personal growth (Bandura, 2000; Ormrod, 2006). Among postgraduate students, including those in Library and Information Science (LIS), self-efficacy helps identify strengths and weaknesses, fosters skill development, and promotes effective management of complex tasks such as research projects (Badawi, 2001; Arnaut, 2017; Abd & Al-Atab, 2023). Likewise, high self-efficacy enables students to approach challenging tasks confidently, persist through setbacks, and maintain a proactive attitude toward goal attainment (Bishop & Bieschke, 1998; Phillips & Russell, 1994; Abd et al., 2023).

Bandura (1997) identifies four key sources of self-efficacy: mastery experience, vicarious experience, verbal persuasion, and physiological response. Mastery experience is the direct experience of success or failure, which plays a critical role in shaping an individual's self-efficacy (Gao, 2020). Successful experiences strengthen self-efficacy, increasing confidence and the likelihood of future achievements. Conversely, repeated failures can diminish self-efficacy, instilling fear and avoidance behaviors that hinder engagement and performance in similar tasks (Al Umairi, 2025). Mastery experiences, or enactive attainments, are the most powerful predictors of self-efficacy, as successful task completion strengthens confidence while early failures may diminish it (Kabir & Rabby, 2023; Chen, 2007; Kwarteng & Sappor, 2021).

Vicarious experiences, gained through observing peers' successes, reinforce the belief that similar achievements are attainable, particularly when role models are relatable and credible (Bandura, 1977; Kabir & Rabby, 2023; Zimmerman, 2000). Vicarious experiences are an educational approach that allows students to learn by observing others. As a key source of self-efficacy, they can enhance learning when carefully designed, including selecting appropriate people and tasks to observe, encouraging discussion, and fostering collaboration. Thus, observing peers or mentors successfully complete tasks, can enhance self-efficacy by showing that similar achievements are attainable (Forbes, 2022). For LIS doctoral students, observing others navigate research challenges such as designing studies, analyzing data, or writing scholarly outputs can boost confidence in their own abilities. Delivering these experiences through structured seminars, workshops, or recorded sessions allows students to learn flexibly, while intentional guidance ensures they internalize effective strategies and develop stronger research self-efficacy.

Verbal persuasion involves encouragement and constructive feedback from mentors or peers, which can inspire perseverance and reinforce belief in one's abilities (Redmond, 2010; Usher & Pajares, 2006). Verbal persuasion enhances students' self-efficacy by convincing them of their capability to succeed in challenging tasks (Artino, 2012). It involves encouragement and positive feedback from significant others, such as teachers, peers, or parents, which fosters confidence in one's abilities (Chang, 2006). Constructive feedback, particularly from peers or mentors, further strengthens self-efficacy by validating skills and reinforcing successful performance (Akosah et al., 2024).

Physiological responses refer to individuals' interpretation of emotional and physical reactions during tasks; those with high self-efficacy perceive arousal as motivating, whereas those with low self-efficacy may view it as limiting (Bandura, 1977; Zimmerman, 2000;

Deroncele-Acosta & Norabuena-Figueroa, 2025). For doctoral students in LIS in Southwest Nigeria, understanding these four indicators of self-efficacy is crucial for enhancing research engagement, academic productivity, and overall competence in their field. While previous studies have examined self-efficacy in writing and research contexts, the broader application of mastery experience, vicarious experience, verbal persuasion, and physiological responses provides valuable insights into how doctoral students develop confidence in managing complex academic and professional challenges.

Statement of the Problem

Doctoral students in Library and Information Science face academic and research challenges that require confidence and persistence. Self-efficacy is critical for navigating these challenges, yet there is limited research on how mastery experience, vicarious experience, verbal persuasion, and psychological response influence self-efficacy among LIS doctoral students in Southwest Nigeria. Understanding these factors can provide insights for educators and program coordinators to strengthen students' confidence, enhance research engagement, and improve academic performance while contributing to the broader literature on doctoral education and professional development.

Objectives of the study

i. To investigate the level of mastery experience among Doctoral LIS students in South-West, Nigeria.
ii. To investigate the level of vicarious experience among Doctoral LIS students in South-West, Nigeria.
iii. To find out the level of verbal persuasion among Doctoral LIS students in South-West, Nigeria.
iv. To examine the level of psychological response among Doctoral LIS students in South-West, Nigeria.

Conceptual Review

Self-efficacy, grounded in Bandura's social cognitive theory, is the belief in one's ability to perform tasks and achieve goals, influencing motivation, effort, and persistence in academic and research activities (Bandura, 1977, 1986, 1997; Nordlof et al., 2019). For doctoral students in Library and Information Science, self-efficacy is critical for engaging in complex research tasks such as designing studies, analyzing data, and writing scholarly outputs. Bandura identifies four primary sources of self-efficacy: mastery experience, vicarious experience, verbal persuasion, and psychological responses. Mastery experiences, which involve successfully completing research milestones, strengthen confidence and reinforce the belief that future research challenges can be overcome (Kwarteng & Sappor, 2021; Velthuis et al., 2014). Vicarious experiences allow students to learn by observing peers or mentors successfully navigating research tasks, fostering the belief that they too can achieve similar outcomes (Bandura, 1977, 1997; Loo & Choy, 2013). Verbal persuasion, through constructive feedback and encouragement, motivates students to persist in the face of difficulties and enhances their belief in their capabilities (Agricola et al., 2020; Pajares, 2012). Psychological responses, including stress, anxiety, and emotional arousal, also shape self-efficacy, with effective management promoting resilience and sustained engagement in research tasks (Artino, 2012; Mensah et al., 2023).

Empirical Review

Empirical evidence shows that doctoral students in Nigeria exhibit varying levels of self-efficacy across research-related competencies. Some studies report high self-efficacy in research design, methodology, and data analysis (Adekunle & Madukoma, 2022; Komşu, 2021; Olutoki & Osoba, 2024), while others indicate moderate levels, highlighting the influence of mentorship, research environment, and personal motivation (Awodoyin et al., 2024). Likewise, Miao et al. (2025) found that elevated research self-efficacy among students positively affected academic achievement, with student engagement serving as a mediating factor. Similarly, Yi (2024) reported that a strong sense of belonging combined with high self-efficacy and academic hardiness enhanced student engagement and fostered positive learning experiences. Guo et al. (2024) highlighted that self-efficacy is a key predictor of academic motivation and performance among doctoral students, while Alismail et al. (2024) observed that high self-

efficacy was associated with proactive learning behaviors and a strong need for knowledge.

Equally, Bussell et al. (2017), reported statistically significantly higher levels of research confidence among Ph.D. student. On the other hand, Similarly, Oyugi et al. (2023) found out that postgraduates' students were rated average in terms self-efficacy belief in their proficiency in thesis writing, meaning that PhD students reported a low self-efficacy which suggest the need for more self-confidence and belief towards thesis completion. Also, Domaley et al. (2023) found a statistically significant relationship between academic stress as a form of psychological response and thesis completion among postgraduate students. Likewise, study by Amin et al. (2023) expressed that emotions play a crucial role in maintaining motivation, one of the factors which affect one's learning achievement Moreover, Ren et al. (2024) demonstrated that mentor support enhances research ability by strengthening self-efficacy and learning engagement, underscoring the critical role of mentorship in postgraduate education. Understanding the roles of mastery experience, vicarious experience, verbal persuasion, and psychological responses is therefore essential for enhancing research engagement, academic productivity, and overall doctoral success in LIS programs.

Theoretical Review

Theoretically, this study is grounded in Albert Bandura's social cognitive theory (Bandura, 1986), which posits that human behavior results from the dynamic interaction of personal, environmental, and behavioral factors. A central aspect of this theory is self-efficacy, defined as an individual's belief in their ability to successfully perform tasks, which strongly influences motivation, effort, and persistence in academic activities (Bandura, 1997). Research indicates that self-efficacy is shaped by mastery experiences, vicarious experiences, verbal persuasion, and physiological responses, and it significantly affects students' engagement, academic performance, and resilience in challenging tasks (Alhadabi & Karpinski, 2020; Sökmen, 2021). For postgraduates in general, high self-efficacy not only enhances research creativity but also supports sustained academic success and effective coping with the demands of doctoral studies (Han et al., 2024).

Methodology

This study employed a survey research design to systematically collect primary data from doctoral students in Library and Information Science across six public and private universities in South-West Nigeria. This design was appropriate as it allowed for the collection of quantitative data from the entire population of 375 students, making it possible to generalize the findings to the broader population. The study targeted students who were actively enrolled in MPhil/Ph.D. and Ph.D. programs, ensuring that the experiences captured reflected current doctoral training environments. A structured questionnaire was developed to gather data on respondents' demographic characteristics and self-efficacy, focusing on mastery experience, vicarious experience, verbal persuasion, and psychological response. The instrument was adapted and refined to suit the context of Library and Information Science doctoral students, with items rated on a four-point scale to capture variations in perceived self-efficacy. Data collection was conducted personally by the researcher and three trained research assistants who were familiarized with the study objectives, questionnaire structure, and ethical considerations, ensuring accurate administration and confidentiality of responses. Participants were guided through the process, and completed questionnaires were retrieved either immediately or at an agreed-upon time, with field editing conducted to ensure completeness and reliability. The data collected were entered into SPSS version 23.0 for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic characteristics and evaluate the levels of self-efficacy among the doctoral students. This approach facilitated the identification of patterns and trends in mastery experiences, vicarious experiences, verbal persuasion, and psychological responses, providing insights into how these factors collectively influence self-efficacy and academic engagement among doctoral students in Library and Information Science.

Data analysis and Results

Table 1: Distribution of Respondents by Demographic Information

Variable	Category	Frequency	Percentage (%)
Gender	Male	139	44.1
	Female	176	55.9
	Total	**315**	**100**
Age Group	< 30 years	24	7.6
	30–39 years	52	16.5
	40–49 years	151	47.9
	50–59 years	73	23.2
	60 years or more	15	3.8
	Total	**315**	**100**
Marital Status	Single	39	12.4
	Married	267	84.8
	Divorced/Separated	3	1.0
	Widow/Widower	6	1.9
	Total	**315**	**100**
Employment Status	Full Time	285	90.5
	Part Time	12	3.8
	Self Employed	15	4.8
	Not Employed	3	1
	Total	**315**	**100**
Sources of Funding	Self-Funded	246	78.1
	TETFund	56	17.8
	Institution/Employer	12	3.8
	Others	1	0.3
	Total	**315**	**100**

Source: Researcher's field work, 2025

The study involved 315 doctoral students in Library and Information Science across Southwest Nigeria. Most respondents were female (55.9%) and aged between 40 and 49 years (47.9%). A majority were married (84.8%) and in full-time employment (90.5%). Most students self-funded their studies (78.1%), with smaller proportions supported by TETFund (17.8%) or their institutions/employers (3.8%).

Table 2: Level of mastery experience among Doctoral LIS students in South West, Nigeria

S/N	Mastery Experience	VHL(4)	HL(3)	LL(2)	VLL(1)	Mean	SD
	My ability to---						
1	use past academic involvement to build confidence is …	116 (36.8%)	181 (57.5%)	18 (5.7%)	–	3.31	0.57

S/N	Mastery Experience	VHL(4)	HL(3)	LL(2)	VLL(1)	Mean	SD
2	build the confidence needed to complete each chapter of my thesis is …	98 (31.1%)	203 (64.4%)	11 (3.5%)	3 (1.0%)	3.26	0.56
3	transform initial setbacks into learning opportunities	92 (29.2%)	209 (66.3%)	8 (2.5%)	6 (1.9%)	3.23	0.59
4	overcome anxiety through consistent mastery of smaller tasks is …	98 (31.1%)	194 (61.6%)	17 (5.4%)	6 (1.9%)	3.22	0.63
5	apply familiar academic skills to the thesis process is …	89 (28.3%)	208 (66.0%)	12 (3.8%)	6 (1.9%)	3.21	0.60
	Average Mean =					**3.24**	

Table 2 presents the level of mastery experience among Doctoral LIS students in South-West Nigeria. The findings indicate a high level of mastery experience, with an average mean of 3.24, showing that students generally feel confident in using past academic involvement, overcoming setbacks, managing smaller tasks, and applying familiar skills to their thesis work. The findings above were in agreement with that of Bussell et al. (2017), who reported statistically significantly higher levels of research confidence among Ph.D. student. Findings also corroborate with that of Olutoki and (2024) who reported a high level of Research self-efficacy among postgraduate students in library schools. On the other hand, study findings negate that of yugi et al. (2023) who found out that postgraduates' students were rated average in terms self-efficacy belief in their proficiency in thesis writing, meaning that PhD students reported a low self-efficacy which suggest the need for more self-confidence and belief towards thesis completion. On the other hand, study findings corroborate that of Adekunle and Madukoma (2022) who reported high level of research self-efficacy among doctoral students. In essence, high mastery experience enhances doctoral students' confidence, persistence, and ability to overcome research challenges, underscoring the need for supportive and feedback-rich academic environments.

Table 3: Level of vicarious experience among Doctoral LIS students in South West, Nigeria

S/N	Vicarious Experience	VHL(4)	HL(3)	LL(2)	VLL(1)	Mean	SD
	My ability to---						
1	study and learn from other researchers and scholars is …	138 (43.8%)	168 (53.3%)	6 (1.9%)	3 (1.0%)	3.40	0.58
2	build confidence through the experiences of others is …	137 (43.5%)	166 (52.7%)	9 (2.9%)	3 (1.0%)	3.39	0.59
3	be motivated by colleagues' achievements is …	134 (42.5%)	169 (53.7%)	9 (2.9%)	3 (1.0%)	3.38	0.59
4	draw inspiration from the successes of role models in the field of librarianship is …	121 (38.4%)	179 (56.8%)	12 (3.8%)	3 (1.0%)	3.33	0.60
5	learn through observing others is …	122 (38.7%)	175 (55.6%)	15 (4.8%)	3 (1.0%)	3.32	0.61
	Average Mean =					**3.36**	

Table 3 presents the level of vicarious experience among Doctoral LIS students in South-West Nigeria. The results reveal a high level of vicarious experience, with an average mean of 3.36, indicating that students actively learn from other researchers, gain confidence through others' experiences, find motivation in colleagues' achievements, draw inspiration from role models, and enhance their skills by observing others. The above findings correlate with that of Miao et al.

(2025) who found that high research self-efficacy among doctoral students positively influenced academic achievement, mediated by student engagement. Also, study findings concur with that of Ren et al. (2024) who further highlighted the role of mentorship in enhancing research capabilities through the development of self-efficacy and engagement. Likewise, study findings agrees with that of Yi (2024) who reported that a combination of strong self-efficacy, academic hardiness, and a sense of belonging enhances student engagement and fosters positive learning experiences. In essence, the high level of vicarious experience shows that doctoral students gain confidence and motivation by observing peers and mentors, which strengthens their research engagement and achievement. This underscores the importance of peer learning, mentoring, and role modeling in enhancing doctoral students' academic success.

Table 4: Level of verbal persuasion among Doctoral LIS students in South West, Nigeria

S/N	**Verbal Persuasion**	**VHL(4)**	**HL(3)**	**LL(2)**	**VLL(1)**	**Mean**	**SD**
	My ability to---						
1	use positive feedback from my supervisor to build confidence is …	143 (45.4%)	163 (51.7%)	6 (1.9%)	3 (1.0%)	3.42	0.58
2	strengthen the belief in success through positive feedback is …	129 (41.0%)	174 (55.2%)	9 (2.9%)	3 (1.0%)	3.36	0.59
3	use guidance from experienced researchers to refine my skills is …	128 (40.6%)	175 (55.6%)	9 (2.9%)	3 (1.0%)	3.36	0.59
4	respond positively to constructive criticism is …	120 (38.1%)	180 (57.1%)	15 (4.8%)	–	3.33	0.56
5	improve confidence by embracing social persuasion and encouragement is …	96 (30.5%)	192 (61.0%)	27 (8.6%)	–	3.22	0.59
	Average Mean =					**3.34**	

Table 4 presents the level of verbal persuasion among Doctoral LIS students in South-West Nigeria. The findings indicate a high level of verbal persuasion, with an average mean of 3.34, showing that students effectively use positive feedback from supervisors, guidance from experienced researchers, constructive criticism, and encouragement to build confidence and strengthen their belief in academic success. Study findings agree with the work of Guo et al. (2024) who emphasized self-efficacy as a key predictor of academic motivation and performance. Similarly, the above findings is associated with the work of Alismail et al. (2024) who linked high self-efficacy to proactive learning behaviors and a strong need for knowledge. Thus, the high level of verbal persuasion indicates that encouragement and constructive feedback from supervisors and peers boost doctoral students' confidence and motivation. This highlights the role of supportive communication and mentorship in sustaining students' belief in their academic success.

Table 5: Level of psychological response among Doctoral LIS students

S/N	**Psychological Response**	**VHL(4)**	**HL(3)**	**LL(2)**	**VLL(1)**	**Mean**	**SD**
	My ability to---						
1	manage emotional stress and remain focused during thesis writing is …	114 (36.2%)	171 (54.3%)	24 (7.6%)	6 (1.9%)	3.25	0.67

S/N	Psychological Response	VHL(4)	HL(3)	LL(2)	VLL(1)	Mean	SD
2	interpret psychological responses positively is …	76 (24.1%)	207 (65.7%)	29 (9.2%)	3 (1.0%)	3.13	0.60
3	use relaxation techniques to maintain focus is …	67 (21.3%)	219 (69.5%)	26 (8.3%)	3 (1.0%)	3.11	0.57
4	regulate emotions in order to boost confidence is …	51 (16.2%)	243 (77.1%)	18 (5.7%)	3 (1.0%)	3.09	0.50
5	turn nervousness into motivation is …	58 (18.4%)	230 (73.0%)	18 (5.7%)	9 (2.9%)	3.07	0.59
	Average Mean =					**3.13**	

Table 5 presents the level of psychological response among Doctoral LIS students in South-West Nigeria. The results show a moderate to high level, with an average mean of 3.13, indicating that students are generally able to manage stress, regulate emotions, use relaxation techniques, and interpret psychological responses positively to maintain focus and confidence during thesis writing. Consequently, the findings above correlates with the work of Domaley et al. (2023) who found a statistically significant relationship between academic stress as a form of psychological response and thesis completion among postgraduate students. this stress the fact that students with high psychological response will find it difficult to complete thesis writing task. Moreso, study findings corroborated with that of Amin et al. (2023) who reported that emotional dimension of self-efficacy in highly linked to thesis writing deficiency. Hence, fostering emotional resilience and stress management is crucial for enhancing doctoral students' research productivity.

Generally, the implications of these findings are significant for LIS doctoral programs. They suggest that creating supportive research environments that provide opportunities for mastery, modeling, constructive feedback, and emotional support can enhance students' self-efficacy, research engagement, and overall academic productivity. Encouraging mentorship, peer collaboration, and resilience-building strategies can therefore be instrumental in ensuring successful outcomes for doctoral students, ultimately contributing to higher-quality research outputs and stronger professional competence in the field of Library and Information Science.

Conclusion

The study concludes by highlighting the critical significance that self-efficacy components have in determining how well doctoral students are able to handle the demands of thesis writing. These experiences cultivate resilience, confidence, and academic perseverance when they are supported by peer collaboration, supportive supervision, and positive reinforcement. Therefore, improving the institutional frameworks that support these elements can raise the overall caliber of research and the completion rates of PhD programs in Nigerian universities.

Recommendations

Based on the findings, the following recommendations are made:

i. Doctoral LIS students should strengthen their mastery experience by engaging in consistent research activities and setting realistic academic goals.
ii. Thesis supervisor(s) should provide regular encouragement, constructive feedback, and mentorship to boost students' confidence and self-efficacy.
iii. Universities should promote peer-learning and mentorship programs that allow students to learn from successful colleagues and role models.
iv. Academic institutions should organize workshops on stress management and emotional regulation to enhance students' psychological resilience.
v. Policy makers in higher education should design supportive research environments that encourage continuous learning, feedback, and collaboration

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