The Impact of Learned Helplessness and Intervention Strategies on Academic Outcomes of Students with Learning Disabilities

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Abstract

This study investigates the learned helplessness and intervention strategies in determining academic outcomes for students with learning disabilities. A quantitative research design was utilized where structured surveys were conducted on three main variables, which included learned helplessness, academic performance, and the moderating role of intervention strategies. The participants were approximately 100 students from different schools in the Balqa Governorate, Jordan, who were selected through stratified random sampling to ensure representation of gender, academic year, and urban/rural settings. Thus, it can be deduced that, with an overwhelming calculated statistical significance (P-values of 0.000), the two intervening methods in combination with learned helplessness profoundly shape academic performance. This is further supported by powerful T-statistics (4.002 and 5.601). Nonetheless, the moderating effect proved to be statistically nonsignificant (P = 0.084, T = 1.729), which indicates that the moderator was not important in centering the relationship between the predictors and academic results. This finding highlights the need for future research to examine why commonly applied intervention strategies may not buffer the negative effects of learned helplessness, especially considering intervention effort and time, educator preparation, and responsiveness to learner profiles. Gaining insight into these factors may help in developing more tailored and contextually appropriate intervention strategies for learners with learning disabilities.

Keywords: students with special educational needs, learned helplessness, academic outcomes, intervention strategies, and moderation effects in learning outcomes

1. Introduction

Education is vital to personal and societal growth, and yet students with learning disabilities (LD) face particular challenges that severely affect their performance (Bruefach and Reynolds, 2022). A psychological phenomenon that furthers adds to the coping challenges is learned helplessness which is defined as a scenario where learners feel powerless because of negative academic experiences (Ghasemi, 2021). Such a perspective can considerably alter the academic results by reducing one's motivation, self-efficacy, and achievement within educational domains. Learned helplessness seems like a self-fulfilling prophesy in which students expect that they will not succeed and, hence, do not make attempts to engage, and subsequently, they do not achieve with academic standards(He, 2021). Learned helplessness is an enduring phenomenon that stifles a learner's academic achievement and curtails their prospective professional and social development. Its impact is also a strain on teachers and the educational system as a whole, indicating the importance of responding to the needs of students with learning disabilities.

The imbalance in the educational system affects the teachers and the system profoundly in this case, supporting the need for assisting students with learning disabilities. Teachers also experience secondary learned helplessness when they are faced with inadequate success when attempting to help students with learning disabilities (LD) and are left with little to nothing. This results in frustration, lack of motivation, and lowered expectations, which only helps to promote disengagement and misbehavior, which in turn discourages the teacher (Woodcock and Reupert, 2017, Skaalvik, 2018). In the end, both the teacher and student suffer and are caught in a cycle that promotes decreased

effort and achievement. This illustrates the need for emotional support and teacher training that is focused on empowering the teachers.

Understanding the phenomenon's impact on academic performance is critical for designing interventions that attempt to mitigate these impacts and enhance educational performance (Acosta Castellanos and Queiruga-Dios, 2022). Jordan, particularly the Balqa Governorate, provides an interesting context for exploring this issue due to its multicultural student population and the multitude of socioeconomic factors at play; however, even with the Ministry of Education's effort to promote supportive education systems, Balqa's LD students continue to face significant challenges with specialized instruction, stigma, and lack of proper learning opportunities (Al-Dababneh and Al-Zboon, 2024). These obstacles further complicate the creation of learned helplessness patterns among students, which results in negative academic outcomes for these students. To begin solving this problem, some forms of interventions can help mitigate the impacts of learned helplessness and improve academic achievement. These may comprise individualized educational plans, in-service courses for teachers on adaptive methods of instruction, and counseling aimed at cultivating self-affirmation and resiliency in learners with learning disabilities (LD). With such purposeful intervention, teachers and educational authorities can work toward less restrictive educational settings that actively engage and uplift students in their academic pursuits(AL-Maraziq et al., 2024). Students with learning disabilities face daunting academic and psychological obstacles, particularly in developing countries which tend to lack resources and social support systems. In the Middle East, specifically in Arab countries, the problem of learned helplessness among students with LD remains a relevant issue. The phenomenon of learned helplessness is deep rooted in the absence of adequate specialized educational resources, social stigmatization, insufficient training for teachers, which altogether result in negative academic performance and diminished self-efficacy amongst the students afflicted (Alawamreh and Elias, 2016; Niknam et al., 2023, Hammadi et al., 2024).

These issues are particularly prominent in the Balqa Governorate. Although Jordan has been trying to formulate inclusive policies for the education of students with learning disabilities (LD), Balqa is still facing a shortage of adequate supportive services, trained staff, and a persistent societal misconception about the students' potentials, such an environment cultivates the phenomenon of learned helplessness, which in turn negatively impacts the students' possibilities for academic success and employment. There is, however, a critical deficit of understanding in this region of the world the extent to which learned helplessness impacts an individual's academic achievement and what focused strategies can be employed to counter the learned helplessness's impact. This is a critical gap in addressing the policy and practice needs for the region which would assist educators and policymakers in the Jordan and the surrounding areas to develop more effective approaches for students with LD (Alawamreh, Obeidat et al., 2023, AL-Maraziq, AL-Hawamdeh et al., 2024).

2. Literature Review

2.1 Students with Learning Disabilities

Learning disabilities are defined as specific and unique difficulties a learner may have in acquiring certain academically relevant skills while having the requisite cognitive capacity and not caused by other conditions such as sensory disabilities, intellectual disability, or socioeconomic factors(Muktamath et al., 2022). Jordan's legal disability framework (specifically, Law No. 20 of 2017 on the Rights of Persons with Disabilities) provides a sweeping definition of persons with disabilities, which includes those whose impairments obstruct the fundamental life activity of learning. This definition includes students with learning disabilities, despite not having a specific legal definition for 'learning disabilities' in Jordan's laws (Al-Zyoud, 2011). Responding to the needs of students with learning difficulties, for example, in the Balqa Governorate, inclusive education practices comprising educational resource and support centers have been introduced, but, as many research items and reports indicate, the major parts of the country's educational system, especially in the less urbanized areas of Balqa, are resource and support centers that are poorly equipped and run by inadequately trained educational professionals, and educational resource centers are not properly developed and equipped. Balqa, in general, as reported by Al-Balqa Applied University educational staff, needs considerable improvement in the design and implementation of educational support and resource centers (Abed and Alsagarat, 2024, Al Sarairah, 2024).

2.2 Learned Helplessness and Academic Outcomes

The term 'learned helplessness' refers to a certain psychological state where a person is unable or unwilling to exert even the most basic effort toward achieving anything. This leads to goals that are unattainable, low motivation, and a tendency to avoid difficult problems (Wu and He, 2022). The phenomenon was described for the first time by Martin Seligman in the 1960s. He, alongside several other researchers, concentrated on its study within the area of pedagogy,

particularly with students presenting learning difficulties. As a consequence of repeated failures or even difficulties in executing certain academic exercises, these students, more often than not, develop the belief that no effort will prove useful, which invariably results in apathy and demotivation. The degreed learned helplessness manifests itself in the drop of performance, achievement, and mental health amongst the individuals (Russo, 2023, Al Sarairah, 2024). The past studies shows that learning disabilities make students more susceptible to learned helplessness than their peers without disabilities, this heightened chance is often the result of repeated exposure to failure coupled with a deficit of support, failure to transform pedagogical practices, and a failure to appreciate the unique nature of the learner. Consequently, these students tend to disengage from learning, report high anxiety levels, and suffer a widening educational gap, underscoring the imperative of intervention to counter the issue (Cobos-Sanchiz, Perea-Rodriguez et al., 2022, Al Sarairah, 2024).

2.3 Challenges in Inclusive Education in Jordan

Jordan has attempted to improve inclusive education within its territory, but students with learning disabilities are still facing many barriers. A vast number of public schools, particularly those located in poor regions, do not have the adequate facilities or staff needed to cater to special needs students (Rodriguez, 2021). Also, the underfunded environments combined with overfull classrooms makes the individualized attention needed impossible, stalling the education of these students. Aside from traditional methods of teaching that do not try to accommodate different types of learners, these factors also add on to the difficulties students with disabilities face. Furthermore, a lack of understanding of the learners' specific needs between learner and parents exacerbates these challenges, leading to ineffective support and the reinforcement of unhelpful stereotypes (Hyassat et al., 2024). In addition to the extenuating structural and instructional hurdles, the issue is made worse by negative attitudes as well as ignorance in general. Parents and teachers alike are poorly educated about the reality of students with learning disabilities and their needs, thus forming unhelpful stereotypes and failing to provide the necessary assistance. Meeting these problems requires parents' and teachers' guidance and even more extensive changes in teaching approaches and infrastructure which centers on the students and provides them with the necessary conditions for effective learning (Alabdallat, Alkhamra et al., 2021, Rawash, Alawamreh et al., 2023).

2.4 Intervention Strategies for Combatting Learned Helplessness

Intervention strategies are effective in addressing the impacts of learned helplessness while enhancing the academic performance of learners with disabilities because they aim to eradicate the failures and restore the students' belief in their ability to succeed academically (Sattar et al., 2022). The most common strategies are promoting self-paced learning, providing steady positive feedback, and using individualized educational plans that match the student's learning style. It is also helpful to offer psychological counseling and use cognitive-behavioral techniques during the sessions in order to help the students restructure their negative self-talk and develop problem-solving abilities needed to cope with academic difficulties (Toyama and Yamazaki, 2021). Social-emotional learning approaches which focus on teaching the students self-regulation, self-motivation, resilience, and other helpful skills to lessen the effects of learned helplessness are also helpful. Teachers can use these approaches if they are well trained and if there is sustained parent support. Such an approach provides an environment in which the students' ability to learn and confidence in their abilities is developed (Firdausih and Aslan, 2024).

2.5 Learned Helplessness and Academic Outcomes: A Hypothesis-Driven Perspective

The phenomenon of learned helplessness involves a psychological condition where one feels incapable of succeeding or having control over their circumstances (Xu et al., 2024). This tends to significantly affect how people perform academically. After a student fails repeatedly, with every successive attempt, they may begin to believe that they will put in effort into trying to succeed, but this effort will be in vain (Hayes et al., 2021). This scenario is common among students with learning disabilities since learning difficulties in undertaking tasks is quite rampant, while the level of provided assistance is often inadequate. Students' anticipatory thoughts of failure, centered around their experiences, create an expectation of continuity. At the same time, such acceptance pessimistically reinforces the cycle for the individual, making it harder to engage and center around meaningful tasks of learning. Hence, H1: Students suffering from learning disabilities demonstrate significant negative correlation between learned helplessness and academic outcomes (Alawamreh and Elias, 2015, Hayes et al., 2021, Xu et al., 2024).

Inadequate management of stress, chronic failure, and a lack of instructional assistance are the central causes of learned helplessness. The scarcity of personalized support, alongside the oversupply of critical and unsupportive pedagogical contexts, becomes detrimental and reinforces the sense of helplessness, underachievement, and the inability to attain success. However, the impact of intervention on motivation and performance is apparent through the application of different forms of intervention, including holistic intervention and psychological support. Thus, H2

indicates the presence of a strong relationship between intervention strategies and the academic performance of learners with learning disabilities. Furthermore, support and the instructional scaffolds mitigated the effects brought about by learned helplessness, resulting in better outcomes than their peers with learning disabilities who received no support (Ghasemi, 2021; Ghasemi and Karimi, 2021).

2.6 Critical Synthesis

Learned helplessness is considered to be a psychological barrier that stifles motivation, self-efficacy, and academic achievement for students with learning disabilities (Barrett, 2017; He, 2021). The reasons for learned helplessness remain contested. Some studies attribute it to a lack of success with repetitive academic tasks and negative academic feedback (Kolber, 2023), while others focus on socio-emotional and contextual factors, including teacher perceptions and the overall climate of the school (Hawrot and Zhou, 2024). These distinct factors impact the range of responsive change strategies, which include individualized psychological assistance and comprehensive educational reform. There is a mixed body of evidence for intervention outcomes, including socio-emotional programs and teacher professional development. Some scholars find that strategies lead to significant gains when sustained and customized (Schunk and DiBenedetto, 2021), while others see only fleeting impact or highly localized change (Reeve and Jang, 2022). In addition, very few studies have examined these strategies as moderating variables in the relationship between learned helplessness and academic performance gaps, especially in underrepresented contexts such as Jordan. This is the critical gap the study addresses.

2.7 Hypotheses Development

Based on the objectives of this study, three hypotheses were developed related to the interventions, learned helplessness, and academic outcomes to analyze their associations. The scope of these hypotheses comprises predicting the extent to which the interventions improve students' academic performance, the impact of learned helplessness on the level of achievement, and whether the intervention techniques could counterbalance the learned helplessness to some degree. The rationale for the hypothesis formulation is based on the prior studies, which underscore the critical role of psychological and instructional, along with learned support, in the advancement of students' academic outcomes. The hypothesis of this study is as follow

H1: There is a positive and significant relationship between intervention strategies and academic outcomes among students.

H2: There is a positive and significant relationship between learned helplessness and academic outcomes among students.

H3: The moderating effect of intervention strategies on the relationship between learned helplessness and academic outcomes is significant.

3. Methodology

3.1 Research Design

This study uses a quantitative approach to investigate the impact of learned helplessness and intervention strategies on the academic achievement of learners who have learning disabilities (Alawamreh et al., 2023, Qawaqneh et al., 2023). Employing survey data provides the opportunity to assess learned helplessness, intervention strategies, and subsequent achievement across a wide array of subjects. This method is especially useful in the detection of statistical phenomena and the formulation of predictive models regarding the degree to which specialized interventions, in the form of special educational attention, psychological counseling, and social-emotional education, may moderate the adverse impact of learned helplessness. Although qualitative methods might offer more significant understanding, the value of quantitative methods, in the form of empirical accuracy primary and widely applicable conclusions, cannot be ignored (Alawamreh et al., 2023).

3.2 Participants and Sampling

Approval was obtained from the Balqa Directorate of Education – Salt, and informed consent was sought from all participants. Learners aged between 10 – 15 years from the upper primary and lower secondary levels were targeted, since this age group is most relevant for studying the development of learned helplessness and the accompanying decline in academic motivation. The selected schools in the Balqa Governorate served the purpose of incorporating the geographical and educational diversity of Jordan. The research group understood that participants suffering from learned helplessness would be suspicious and reluctant to participate in the study. Therefore, in conjunction with the school counselors and teachers, the research group sought to clarify the objectives of the study, ensuring that it was

conducted in a voluntary and supportive context. This technique maximized the chances for honest reporting about the use and effectiveness of the intervention measures.

- **Sample Size:** 100 participants will be recruited, 56 being female students and 44 being male students. This distribution provides a balance between both genders so that any gender differences regarding the outcomes of the study can be properly analyzed.
- **Sampling Technique:** • Through stratified random sampling, gender, academic year, and urban or rural residence will be used as key variables, to ensure that there is representation across essential factors. In addition, as the participants of the study have to be students from different education faculties who are ready to take part in the study, this approach will also ensure precision in addressing the issues concerned with the impact of learned helplessness, intervention strategies, and academic performance.

3.3 Questionnaire Design

This survey was designed with three major factors in mind: learned helplessness, academic performance and interventions (as a moderating variable). As the research goal was defined and experts were consulted, the questionnaire items were formulated in a way that would effectively capture these factors. All items employ a 5-point Likert scale, in which (5) means "Strongly Agree" while (1) means "Strongly Disagree." The scale permits the assessment of the participants' perceptions concerning the provided statements. This approach enables participants to articulate their perspectives and experiences regarding the academic challenges and successes they encountered.

The first construct, "Learned Helplessness", is evaluated through items focusing on students' self-perception in terms of personal abilities and the coping mechanisms they employ to deal with academic challenges (Vollmayr and Gass, 2013). Example items are: "No matter how much effort I put into studying I will not succeed" and "When I fail a test or assignment, I think it is because I am not able to learn." The second construct, Academic Outcomes, assesses students' self-satisfaction, self-confidence, self-efficacy, and achievement in school with items such as: "I am satisfied with my academic performance in school" and "My grades reflect my actual ability and efforts in my studies." The last construct, Intervention Strategies (Moderating Variable), seeks to assess the effect of educational support with items such as "My teachers help me more when I do not perform well" and "I become more interested and active in learning when intervention strategies are used." These items help to understand the interconnectedness of learned helplessness, academic achievement, and the use of intervention aids (Overmier and Molet, 2022).

3.4 Data Collection

The first step for data collection is getting the consent from the participants which is needed in guaranteeing voluntary participation and confidentiality. Participants are made aware about the study's objective, their involvement is voluntary, and the participant can withdraw from the study at any point in time with no repercussions, depending on availability and willingness of participants, the questionnaire will be given to the participants personally or online. If the survey is administered in the presence of the subjects, they will be given a comprehensive set of directions and ample time for completion of the survey.

3.5 Data Analysis

In regards to the online administration, the survey will be distributed via a platform that ensures privacy for participants. All responses to the questionnaire after completion will be collected and saved in a protected database for post-analysis. The analysis will focus on the interrelations of learned helplessness, academic performance, and the impact of certain strategies on those relations using statistical procedures (Wu et al., 2022, Al-Mawadieh et al., 2024). To guarantee the credibility of this study, expert validation and a pilot testing of the questionnaires were done prior to the comprehensive data collection. The experts offered constructive feedback that helped refine the survey items through a pilot test so that all the participants could understand and meaningfully respond to the questions.

4. Findings

The data was analyzed using Smart PLS version 3. The sample's descriptive statistics were obtained utilizing the earlier program to examine the latent variable in the causal structure. The results of the statistical analyses will be presented in the following sections.

4.1 Evaluation of the Measurement Model

In accordance with Hair et al. (2016), the measurement model was evaluated to ensure its reliability and validity. The indicator reliability was confirmed since all item loadings were greater than 0.70. The Internal consistency evaluated by Cronbach's alpha and composite reliability was also greater than 0.70. Convergent validity was proved by AVE

values over 0.50, and discriminant validity was established by the Fornell-Larcker criterion and HTMT ratio. These results imply that all constructs in the model were reliable and valid (Sekaran and Bougie, 2016). The provided data shows in table (1) and figure (1) how the measurement model was assessed by means of 20 indicators. The results showed that all items had a factor loading higher than 0.50 which is acceptable. Haji-Othman and Yusuff (2022) have suggested that for factor loadings from 0.40 to 0.70, the indicator should only be deleted if it increases the composite reliability (CR) beyond the threshold value. Likewise, Henseler, Ringle, and Sinkovics (2009) mentioned that such indicators tend to have less than optimal relevance and should only be deleted if their exclusion improves CR. Given that all items in this study met the threshold for the factor loading, none of the items were necessary to be removed, thus all items were accepted in the measurement model."

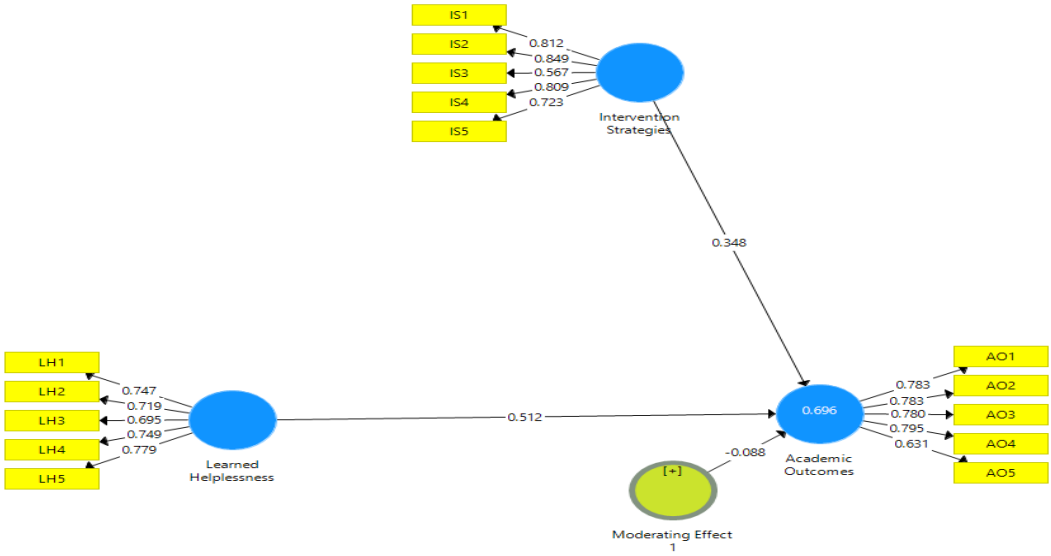

Figure 1. Evaluation of the Measurement Model

Table 1. Evaluation of the Measurement Model

	Academic Outcomes	Intervention Strategies	Learned Helplessness	Moderating Effect 1
AO1	0.783			
AO2	0.783			
AO3	0.780			
AO4	0.795			
AO5	0.631			
IS1		0.812		
IS2		0.849		
IS3		0.567		
IS4		0.809		
IS5		0.723		
LH1			0.747	
LH2			0.719	
LH3			0.695	
LH4			0.749	
LH5			0.779	
Learned Helplessness * Intervention Strategies				1.103

Table (2) shows the reliability and validity for the four previous constructs: Academic Outcomes, Intervention Strategies, Learned Helplessness, and Moderating Effect 1. The internal consistency measures for the Athletes Self Improvement Questionnaire cuts ranges between 0.792 and 0.811 which is deemed acceptable. The rho_A values are also within acceptable threshold, thus confirming reliability. For all constructs, Composite Reliability has values exceeding the 0.7 threshold, which confirm reliability. The AVE value ranges from 0.545 to 0.576 which are above the minimum threshold of 0.5, indicating convergence validity. Moderating Effect 1 is exceptional in the fact that it has a perfect reliability score (1.000), which sort of suggests that the score comes from something that is more of a calculated construct as opposed to a measured latent variable.

Table 2. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Academic Outcomes	0.811	0.816	0.869	0.573
Intervention Strategies	0.810	0.835	0.869	0.576
Learned Helplessness	0.792	0.798	0.857	0.545
Moderating Effect 1	1.000	1.000	1.000	1.000

Table (3) presents the assessment of discriminant validity based on the Fornell-Larcker criterion, which utilizes threshold values. Values along the diagonal are the measures of a construct's AVE which compares the variance captured by the construct with the measurement error. The other measure captures the correlation between different constructs. The results show that AVE for each construct (the square values) is larger than the correlations with all other constructs (the off-diagonal correlations), which implies that discriminant validity is attained. However, Construct Moderating Effect (1) is associated with other constructs through negative relationships which suggest Moderating Effect (1) has a negative correlation. The strong measured validity affirm that each construct is indeed distinct and therefore each measures differ with respect to the variables under the model.

Table 3. Discriminant Validity

	Academic Outcomes	Intervention Strategies	Learned Helplessness	Moderating Effect 1
Academic Outcomes	0.757			
Intervention Strategies	0.738	0.759		
Learned Helplessness	0.747	0.701	0.738	
Moderating Effect 1	-0.366	-0.318	-0.309	1.000

4.2 Measurement of Structural Model

The information obtained is that both Intervention Strategies and Learned Helplessness affect academic outcomes with P-values of 0.000 which confirms their significance as shown in Table (4) and figure (1). The results showing that intervention strategies correlate with academic outcomes fosters the belief that students perform better when interventions are well thought out. In the like manner, the excessive gains of learned helplessness on academic outcomes may suggest that even though students have learned helplessness, factors such as resilience, support systems, or even coping skills help them to succeed academically. As for the rest of the results, the strong T-statistics 4.002 and 5.601 also support these relationships and suggest reasons why focusing on detail to improve academic performance is necessary. However, the Moderating Effect was not found statistically significant (P = 0.084, T = 1.729), indicating that the moderator identified does not play an important role in the latter relationship. It could be weak moderation effect, sample issues, or strong unobserved factors. The negative path coefficient (-0.088) suggests a possible dampening effect; however, its insignificance implies a lack of strong moderation, which is needed for meaningful impact. It is possible that, in this particular sample, the strategies to enhance academic moderation output were not fully effective. This suggests that the intervention strategies coupled with learned helplessness could influence academic performance, but without precise moderation strategies, their impacts were restrained. Despite the fact that both intervention strategies and learned helplessness have an impact on an individual's academic performance, their combined moderating effect in this instance was not significant from a statistical standpoint. This might suggest that the other available options have a greater and more direct academic impact, or that the intervention strategies used in this case need some refinement. There remains a need for further investigation to

determine the most effective moderators (Ghasemi, 2021). Later studies may look at differing moderators and control variables to comprehend more of the details affecting academic performance.

Table 4. Structural model

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Intervention Strategies -> Academic Outcomes	0.348	0.351	0.087	4.002	0.000
Learned Helplessness -> Academic Outcomes	0.512	0.516	0.092	5.601	0.000
Moderating Effect 1 -> Academic Outcomes	-0.088	-0.081	0.051	1.729	0.084

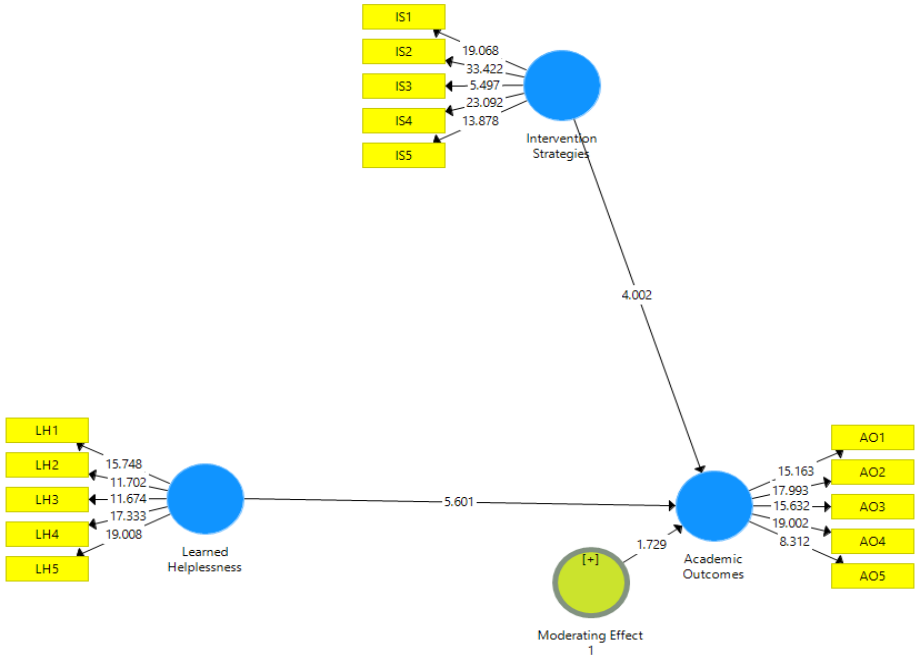

Figure 2. Structural Model

5. Discussion

The outcomes following the structural model provide key recommendations on the interplay between different intervention strategies, learned helplessness, and the consequent academic outcomes. The severe effect of both intervention strategies as well as learned helplessness on academic performance, as corroborated by the P-values (0.000), confirm the significance of these variables in influencing student success. The connection between intervention strategies and student performance indicates that well-crafted and well-executed intervention strategies like scholastic support, skill development, and even motivation boosters can lead to considerable improvement in students' academic performance. Out of all the strategies, motivation and academic assistance enhancement seemed to be the most impactful as they target students' confidence, engagement, and comprehension the most. It appears that the most substantial gains have come from the supplementation of various approaches, rather than the application of a single strategy in isolation. This aligns with previous literature which indicates that sufficient structure, support, and target-centered interventions boost self-efficacy and accomplishment restructures self-efficacy and accomplishment (Schunk, 2003). It is probable that these interventions help students acquire the requisite tools to mitigate the academic difficulties they face and therefore create conditions that lead to improved achievement. In the same way, came across a fascinating finding regarding the positive impact of learned helplessness on general academic performance. Contrary to expectations, it appears that students' feelings of helplessness can be countered

with resilience, coping skills, and support systems which enable them to succeed academically. This is consistent with Abramson et al. (1978) also Seligman (2025) which posits that positive coping mechanisms have the potential to combine with negative outcomes such as learned helplessness. The ability of teachers, family members, and peers to eliminate these helpless feelings can greatly assist students in performing well academically. The moderating effect, P-value 0.084 and T-value 1.729, was found to be statistically insignificant. This indicates that the moderator which was presumed to impact the correlation between intervention strategies/learned helplessness and the academic performance did not have marked effect in this case. The limited sample size and other uncontrolled factors may have contributed to the weak moderating impact. The insignificant moderation suggests that its impact is faint or in balanced towards blindness for the degree of significance in the model. The negative path coefficient (-0.088) signifies that there might be moderation strategies that were too blunt or misplaced for this particular sample. This aligns with the mention of more powerful external factors that were not measured; for example, the socio-economic background, personal motivation, or institutional support may have fogged the intended moderation effect. Moreover, this study shapes the existing body of literature on education and e-learning by exploring the intersection of learned helplessness and intervention methods with students who possess learning disabilities in Jordan. The results, especially regarding the non-significant moderating impact of intervention methods, contribute to understanding the influence of context on the effectiveness of academic support and highlight the need to design more tailored and context-sensitive interventions.

6. Implications for Practice

The results indicate that although struggle strategies and learned helplessness have individual impacts on academic outcomes, the absence of a significant moderation effect suggests that there is a need for specific and targeted approaches to improving academic performance (Xue et al., 2023). Further studies may be conducted to consider other moderators or improve the existing one so that it encompasses additional details to achieve a more logical explanation of the changes in academic performance. Furthermore, the study argues that academic support programs need to be more focused on students exhibiting learned helplessness, particularly those that develop resilience and self-efficacy (Hayes et al., 2021, Xue et al., 2023).

7. Conclusion and Future Research Directions

The study highlights the need for intervention strategies and modifies learned helplessness to maximize academic outcomes while recommending moderators in future research be reconsidered or more selectively defined. Looking into other possible moderators like academic motivation or student engagement may provide greater insight to the phenomenon of academic performance. Future studies may also include examining different forms of support that have the potential of reducing learned helplessness. Particularly, focus could be placed on the ways that these systems interface with intervention strategies designed to improve academic outcomes. As they continue to develop a more nuanced understanding of these multifaceted relationships, educators and policymakers shall be able to design more effective interventions to address the needs of students with learning disabilities in a holistic manner which enhances the academic ecosystem.

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