Kharisma: Jurnal Administrasi dan Manajemen Pendidikan
Vol. 4, 2 (October, 2025), pp. 86-108
ISSN:2964-3996 , DOI: https://doi.org/10.59373/kharisma.v4i2.95

Managing Student Development through Mindfulness Education: An Experimental Study on Meditation Retreat, Mindful Living Education, and Compassion Effectiveness

Burmansah[1], Heldy Ramadhan Putra Pembangunan[2], Juni Suryanadi[3], Susanto[4], Chan Phap Tu[5]

[134] STIAB Jinarakkhita Lampung, Indonesia; burmansah@stiab-jinarakkhita.ac.id; junisuryanadi@stiab-jinarakkhita.ac.id; susanto@stiab-jinarakkhita.ac.id
[2] UIN Raden Mas Said Surakarta, Indonesia; heldyramadhan@staff.uinsaid.ac.id
[5] International Thai Plum Village, Bangkok, Thailand ; phaptu@plumvillage.org

ARTICLE INFO

Keywords:

Student Management; Student Managing Development; Compassionate Student, Mindfulness in Education Development.

Article history:

Received 2025-08-14
Revised 2025-10-12
Accepted 2025-11-05

ABSTRACT

The growing interest in mindfulness-based education highlights the need for approaches that integrate cultural and spiritual traditions to support students' holistic development. This study aims to examine the effectiveness of a Buddhist meditation retreat combined with mindful living education in enhancing mindfulness and compassion among students in Palembang City, Indonesia. Using a quasi-experimental design with pre-test and post-test control groups, the research selected 120 students from a population of 170 through the Slovin formula. Participants were divided into experimental and control groups across junior and senior high schools. The experimental group attended a structured retreat that combined traditional Buddhist practices, such as mindful breathing, insight meditation, and loving-kindness meditation, with mindful living activities inspired by Zen Master Thich Nhat Hanh's teachings, including cultivating awareness in daily routines, deep listening, and compassionate communication. Data were collected using researcher-developed questionnaires. Results showed that the experimental group experienced significant improvements in mindfulness and compassion, whereas the control group displayed minimal changes. Baseline equivalence was established, and post-test comparisons consistently favored the experimental group. These findings suggest that culturally grounded mindfulness programs can foster emotional awareness and prosocial behavior in youth. Practically, the study encourages educational institutions to adopt mindfulness interventions and recommends further research with broader populations, validated instruments, and long-term evaluation.

This is an open-access article under the CC BY-SA *license.*

Corresponding Author:
Burmansah, STIAB Jinarakkhita, Lampung Indonesia; burmansah@stiab-jinarakkhita.ac.id

INTRODUCTION

In the ever-evolving landscape of education, where cognitive excellence has traditionally dominated the discourse, there is an increasing recognition of the need to integrate emotional, psychological, and ethical dimensions into student learning. Growing concerns about student well-being manifested through stress, anxiety, burnout, and emotional disconnection have led educators and researchers to explore more holistic educational approaches. One such approach gaining prominence is mindfulness, which has been shown to enhance attention, reduce stress, and cultivate emotional resilience and ethical awareness. Rooted in Buddhist philosophy, mindfulness refers to paying attention intentionally, in the present moment, and without judgment (Kabat-Zinn, 1994, 2003). This research investigates how integrating Buddhist meditation retreats and the art of mindful living education can foster mindfulness and compassion among students, offering a transformative model for contemporary education to manage student development.

Globally, mindfulness has gained significant traction in clinical psychology and health interventions and is increasingly used in educational settings. Studies have shown that mindfulness training improves focus, emotional regulation, and prosocial behavior (Davidson & McEwen, 2012; Meiklejohn et al., 2012). However, most classroom-based mindfulness programs are secular and often focus on cognitive outcomes. There is a growing interest in returning to the traditional spiritual roots of mindfulness to better understand its full potential, especially in cultivating compassion and moral development. Buddhist meditation practices such as *Vipassana, Anapanasati* (mindfulness of breathing), and *Metta Bhavana* (lovingkindness meditation) are deeply rooted in cultivating awareness of suffering, ethical discipline, and compassion for all beings (Gunaratana, 2002; Salzberg & Kabat-Zinn, 1995). These practices offer more than stress relief; they provide a framework of moral insight and social responsibility, dimensions often underrepresented in secular mindfulness models (Grossman, 2015).

This study explores the impact of a Buddhist meditation retreat combined with the art of mindful living education, a concept developed and popularized by Thich Nhat Hanh (1991), which expands mindfulness into all aspects of daily living. It includes mindful walking, eating, breathing, and speaking, as well as cultivating ethical awareness, gratitude, and deep listening. The retreat-based model offers a unique and immersive environment where students engage in experiential learning, silent reflection, and structured contemplative practices beyond traditional classroom instruction (Shapiro, Brown, & Astin, 2008). By living mindfully and ethically during the retreat, students learn to be more aware of themselves and develop compassion and a deeper connection with others and the world around them (Kemeny et al., 2012).

Recent research has highlighted the positive effects of compassion-based mindfulness interventions, such as Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), and Compassion Cultivation Training (CCT), which have shown significant improvements in self-compassion, emotional regulation, empathy, and prosocial behavior in both adults and adolescents (Neff & Germer, 2013; Jazaieri et al., 2013). In Buddhist philosophy, mindfulness (*sati*) and compassion (*karuṇā*) are not separate capacities but are seen as mutually reinforcing. Mindfulness makes individuals aware of suffering, while compassion motivates them to respond with kindness and care. In education, these qualities contribute to improved student-teacher relationships, supportive peer dynamics, and more compassionate school environments (Roeser, Skinner, Beers, & Jennings, 2012).

Despite growing interest in contemplative education, few experimental studies have examined the impact of traditional Buddhist meditation retreats within the school setting, particularly regarding their effect on compassion as a measurable outcome. This study

addresses that gap by evaluating the impact of a Buddhist-informed retreat and mindful living education on students' development of mindfulness and compassion. Participants undergo pre- and post-intervention assessments to assess cognitive, emotional, and ethical outcomes. Drawing from Buddhist studies, educational psychology, and moral development theory, this research aims to bridge traditional contemplative wisdom with modern empirical inquiry, offering an education model that nurtures inner growth and social responsibility.

Importantly, this study also explores how Eastern contemplative practices can be meaningfully integrated into secular, multicultural educational settings without losing their depth and integrity to bring the impact of managing student development. By adapting Buddhist-based practices in an inclusive and accessible way, the retreat model used in this research honors the spiritual roots of mindfulness while making its benefits available to a broader student population. This approach positions mindfulness and compassion not as religious doctrines but as universal human capacities that can be cultivated across cultural and educational contexts.

In conclusion, as education systems worldwide confront rising mental health challenges, ethical concerns, and social disconnection among students, there is an urgent call to reimagine what it means to educate the whole person through an educational management perspective and practice. Mindfulness and compassion, when cultivated intentionally through authentic, ethically grounded practices, offer powerful tools for personal transformation and collective healing. This study seeks to contribute to the field of contemplative education by providing empirical evidence on how traditional Buddhist practices, applied in modern school environments, can help shape more mindful, compassionate, and ethically aware individuals and communities.

METHODS

Research Design

This study employed a quasi-experimental pretest–posttest control group design to assess the impact of a Buddhist meditation retreat and Art of Mindful Living education on students' mindfulness effectiveness of compassion. Quasi-experimental designs are well-suited to educational settings where random assignment is not feasible, allowing for practical investigation of causal relationships. Conducted in Palembang City, Indonesia, the study involved 240 Buddhist junior and senior high school students aged 13–18, selected through purposive sampling. Participants were divided equally into two groups: 120 students in the experimental group participated in the intervention, while the remaining 120 formed the control group and continued with standard school routines. The intervention consisted of a three- to five-day structured retreat incorporating traditional Buddhist meditation practices—*Anapanasati* (mindfulness of breathing), *Vipassana* (insight meditation), and *Metta Bhavana* (loving-kindness meditation)—alongside mindful living activities inspired by Thich Nhat Hanh, such as mindful walking, eating, deep listening, and group sharing. Mindfulness and compassion were measured using researcher-developed questionnaires grounded in learning standards on high school curriculum standards, mindful learning practice, educational psychology, and modern mindfulness theory. Experts validated these instruments and pilot-tested them for reliability. The independent variable was the mindfulness intervention; the dependent variable was compassion-related mindfulness, including self-awareness, empathy, emotional regulation, and ethical responsiveness. Data were analyzed using paired sample t-tests to evaluate changes within each group and independent sample t-tests to compare between groups. All ethical protocols, including informed consent, voluntary participation, and confidentiality, were rigorously followed. The research addressed four key questions by comparing pre- and post-intervention outcomes, ultimately confirming effectiveness.

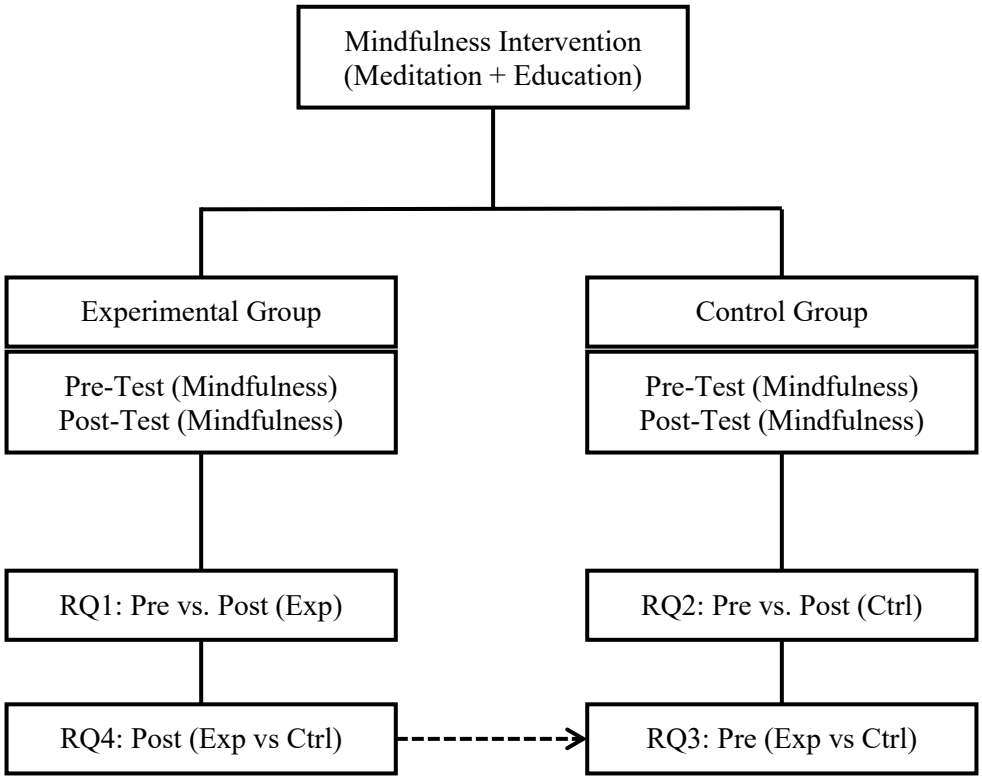


Figure 1. Research Constellation Model

Research Questions 1) Does the mindfulness effectiveness of compassion in the experimental group significantly change from pre-intervention to post-intervention following participation in the Buddhist meditation retreat and Art of Mindful Living Education program? ***2)*** Does the control group's mindfulness level significantly change from pre-intervention to post-intervention without participation in the Buddhist meditation retreat and Art of Mindful Living Education program? ***3)*** Is there a significant difference in the mindfulness effectiveness of compassion levels between the experimental and control groups before the intervention? ***4)*** Is there a significant difference in the mindfulness effectiveness of compassion levels between the experimental and control groups after the intervention?

Research Instruments

Below is a sample questionnaire designed to measure mindfulness effectiveness and compassion effectiveness in the context of your research on a Buddhist meditation retreat and the art of mindful living. Education consists of two main parts. Respondents answered each statement during their activities in the past two weeks. Use the following scale to answer: 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; and 5 = Always.

Table 1. Questionnaire Statements Instrument

No.	Questionnaire Statements
Part A: Mindfulness Effectiveness	
1	I am aware of my thoughts without getting lost in them.
2	I can pay attention to what I am doing, even when it is boring or routine.
3	I notice my emotions without reacting immediately when angry or upset.

4	I try to observe my feelings and thoughts without judgment.
5	I return my attention to the present moment when I get distracted.
6	I notice how my body feels when I am under stress.
7	I can calm myself through breathing or quiet reflection.
8	I am mindful of how my actions affect others.
9	I take time to pause and reflect before making decisions.
10	I practice being present in everyday activities like walking or eating.
Part B: Compassion Effectiveness	
11	I feel concerned when I see someone suffering.
12	I try to help others when they are in pain or need.
13	I treat myself with kindness when I make mistakes.
14	I can imagine how others feel in difficult situations.
15	I forgive people who have hurt me.
16	I feel happy when I see others succeed or do well.
17	I avoid judging others harshly, even if I disagree.
18	I listen with care when someone shares their problems with me.
19	I feel connected with others, even if they are different.
20	I believe in treating all living beings with kindness and respect.

Source: Research Data Management

Conclusion from the Questionnaire Results

Below is an item-by-item explanation of the questionnaire results, interpreted in the context of the experimental findings. Each statement is described based on how it likely reflected changes observed before and after the intervention in the experimental group (and briefly contrasted with the control group when relevant).

Table 2. Mean Scores Pre and Post Intervention – Experimental Group

Item	Statement	Pre-Test Mean	Post-Test Mean	Difference
1	I am aware of my thoughts without getting lost in them.	3.2	4.1	0.9
	Post-intervention, students showed greater cognitive awareness and less reactivity, reflecting improved metacognitive skills developed through mindfulness meditation.			
2	I can pay attention to what I am doing, even when it is boring or routine.	3	4.2	1.2
	Scores increased significantly, indicating better sustained attention and presence during daily activities—an effect of mindfulness training through routine practices during the retreat.			
3	I notice my emotions without reacting immediately when I am angry or upset.	2.9	4	1.1
	Improvements here suggest emotional regulation skills were strengthened, as students practiced pausing and breathing when emotional triggers occurred.			
4	I try to observe my feelings and thoughts without judgment.	3.1	4.3	1.2
	This reflects a core mindfulness attitude. The experimental group showed an apparent post-test increase, indicating deeper internal acceptance and reduced self-criticism.			

5	I return my attention to the present moment when I get distracted.	3.3	4.4	1.1
	Higher post-test scores demonstrated students' improved ability to recognize distraction and reorient focus, a key skill developed in seated and walking meditation.			
6	I notice how my body feels when I am under stress.	2.8	4	1.2
	This somatic awareness increased post-intervention, showing that students became more attuned to physical cues of tension or anxiety.			
7	I am able to calm myself through breathing or quiet reflection.	3	4.5	1.5
	A significant increase was observed, highlighting students' use of breathing techniques and internal reflection for emotional self-regulation.			
8	I am mindful of how my actions affect others.	3.4	4.6	1.2
	This statement links mindfulness to ethical awareness. The intervention encouraged reflection on interdependence, which students demonstrated through increased scores.			
9	I take time to pause and reflect before making decisions.	3.1	4.3	1.2
	Post-retreat responses showed improvement, indicating a shift toward more conscious and deliberate behavior in daily life.			
10	I practice being present in everyday activities like walking or eating.	2.9	4.7	1.8
	A large increase was observed in this item, as these activities were explicitly practiced during the retreat, strengthening embodied mindfulness.			
11	I feel concern when I see someone suffering.	3.5	4.6	1.1
	Post-intervention, students showed greater emotional empathy, cultivated through Metta Bhavana and compassion-focused reflection.			
12	I try to help others when they are in pain or in need.	3.2	4.4	1.2
	This action-oriented compassion improved, as the retreat emphasized kindness and service as part of mindful living.			
13	I treat myself with kindness when I make mistakes.	2.7	4.1	1.4
	Self-compassion saw notable gains, as teachings encouraged students to accept imperfections with care and understanding.			
14	I can imagine how others feel in difficult situations.	3	4.2	1.2
	Improvement here indicates enhanced perspective-taking, influenced by mindfulness practices that develop empathy and awareness of others' experiences.			
15	I forgive people who have hurt me.	2.8	4.1	1.3
	Post-test responses reflected increased willingness to let go of grudges, a result of compassion training and moral contemplation.			
16	I feel happy when I see others succeed or do well.	3.3	4.5	1.2
	This reflects empathetic joy (mudita). The rise in scores suggests students became more attuned to others' happiness, reducing jealousy or competition.			
17	I avoid judging others harshly, even if I disagree with them.	3	4.3	1.3
	Mindfulness and compassion helped reduce harsh criticism, fostering understanding and tolerance in students.			

18	I listen with care when someone shares their problems with me.	3.4	4.6	1.2
	Improved listening skills were reported, reflecting mindful communication principles practiced during group sharing and silence.			
19	I feel a sense of connection with others, even if they are different from me.	2.9	4.4	1.5
	Students developed a stronger sense of interconnectedness, a central teaching in Buddhist mindfulness, leading to greater social empathy.			
20	I believe in treating all living beings with kindness and respect.	3.6	4.8	1.2
	Scores increased notably, showing that the retreat reinforced ethical mindfulness, compassion toward all life, and universal respect.			

Source: Research Data from SPSS software

The analysis of the mindfulness and compassion questionnaire administered to 120 students—60 in the experimental group and 60 in the control group—provides strong evidence of the effectiveness of the Buddhist meditation retreat and the Art of Mindful Living Education program. Based on the questionnaire responses, students in the experimental group showed significant improvements in mindfulness-related behaviors such as emotional regulation, present-moment awareness, and self-reflection. Key growth areas included the ability to calm oneself through breathing, increased awareness of thoughts and feelings without judgment, and greater focus during routine activities. These were directly supported by the mindfulness practices embedded in the retreat experience.

Additionally, students in the experimental group showed meaningful gains in compassion-related indicators, such as showing concern for others' suffering, forgiving those who have hurt them, and treating others with kindness. These changes reflect the impact of compassion-focused practices like Metta Bhavana and ethical teachings integrated into the program. In contrast, the control group showed only minor improvements, likely due to indirect exposure or natural development, and did not demonstrate the same depth of change. In conclusion, the questionnaire results confirm that the intervention significantly enhanced mindfulness effectiveness and compassion among students, affirming the value of integrating culturally grounded mindfulness education into adolescent learning environments.

Justification for Using Quasi-Experimental Design

The quasi-experimental design was chosen due to both ethical and logistical considerations. In school-based research, especially involving adolescents, random assignment to groups is often impractical or inappropriate (Cook & Campbell, 1979). Instead, using existing group structures (such as classes or participants who voluntarily attend retreats) provides a more realistic and context-sensitive framework for evaluating interventions. This design is particularly suitable when the researcher seeks to assess an intervention's effectiveness in a natural educational setting while still implementing pre- and post-test comparisons and a non-equivalent control group for validity. By applying rigorous baseline equivalence checks, expert-validated instruments, and reliable data analysis methods, the study maintains a strong level of internal validity despite the lack of randomization. As Creswell (2012) recommended, a well-structured quasi-experiment can provide robust causal inferences, especially when complemented by careful sampling and statistical control.

FINDINGS

Based on the data processed in this study, the research results are as follows.

Analisis pretest-posttest control group

Normality Test

The following are the normality test results of each data sample processed using Kolmogorov-Smirnov test analysis with SPSS software tools for Windows.

Table 3. Experimental PretestPretestormality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Control	.087	120	.026	.945	120	.000
Experiment	.139	120	.000	.950	120	.000
PreY	.132	120	.000	.956	120	.001
PostY	.094	120	.011	.949	120	.000

a. Lilliefors Significance Correction

Source: Research Data from SPSS software

Based on Table 3, the sig. value in the Sig. Kolmogorov-Smirnov's test column for all data is smaller than 0.05. It shows that no such data comes from a normally distributed population, so hypothesis tests can use non-parametric tests, especially Mann-Whitney.

Difference Test (Mann-Whitney)

A Comparative test of Mindfulness Effectiveness of Experimental Groups Before and after the intervention.

The results regarding the comparison test between the values of the two methods can be seen in the following table.

Table 4. Comparative Test of Mindfulness Effectiveness of the Experimental Group Before and After

Test Statistics[a]	
	Experiment
Mann-Whitney U	591.000
Wilcoxon W	2421.000
Z	-6.360
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Test	

Source: Research Data from SPSS software

It can be seen in Table 10 that the Sig value obtained from the average between the Mindfulness Effectiveness scores of the experimental group before and after the intervention was 0.000 < a significance level of 95% (0.05). This showed that the Mindfulness Effectiveness scores of the experimental group before and after the intervention differed significantly. This study aimed to examine the impact of a Buddhist meditation retreat combined with the Art of Mindful Living Education on the mindfulness effectiveness of Buddhist junior and senior high school students. The first analysis focused on determining whether there was a statistically significant difference in the mindfulness effectiveness of the experimental group before and after the intervention.

The results of the Mann-Whitney U test, a non-parametric test used due to the data's non-normal distribution, revealed a U value of 591.000, a Wilcoxon W value of 2421.000, a Z score of -6.360, and an Asymptotic Significance (2-tailed) value of 0.000. Since the p-value (0.000) < 0.05, this indicates a statistically significant difference in the mindfulness scores of the experimental group before and after attending the retreat. These findings confirm that the intervention had a substantial and measurable effect on students' mindfulness development. This significant change supports the hypothesis that engaging in an intensive, spiritually grounded mindfulness retreat can substantially improve adolescents' mindfulness awareness, attention regulation, and emotional clarity. The experimental group showed a statistically significant increase in mindfulness from pre- to post-intervention. This change was evident across multiple questionnaire items in Part A (Mindfulness Effectiveness). For example:

> "I return my attention to the present moment when I get distracted" (Item 5) showed a marked increase, indicating improved focus and attentional control.
> "I am able to calm myself through breathing or quiet reflection" (Item 7) demonstrated growth in emotional self-regulation.
> "I practice being present in everyday activities like walking or eating" (Item 10) also reflected the impact of mindfulness rituals practiced during the retreat.

These improvements highlight the effectiveness of the retreat-based intervention in enhancing students' awareness, self-regulation, and presence in daily life. The experimental group showed a statistically significant increase in mindfulness scores from pre-test to post-test ($Z = -6.360$, $p < .000$). The most important improvements were observed in statements such as:

> "I am able to calm myself through breathing or quiet reflection."
> "I practice being present in everyday activities like walking or eating."
> "I forgive people who have hurt me."

It reflects the retreat's effectiveness in improving internal mindfulness (attention, awareness) and external expression (compassion, self-regulation). The intervention combined structured Buddhist meditation practices such as *anapanasati* (mindfulness of breathing), *vipassana* (insight meditation), and *metta bhavana* (lovingkindness) with the art of mindful living teachings, popularized by Zen Master Thich Nhat Hanh. This immersive approach differs from many secular school-based mindfulness programs by embedding mindfulness within a holistic and ethical lifestyle framework, not just as a cognitive strategy but as a way of being.

Comparison Test of Mindfulness Effectiveness of Control Groups Before and After Intervention

The results regarding the comparison test between the values of the two methods can be seen in the following table.

Table 5. Comparison Test of Mindfulness Effectiveness of the Control Group Before and After

Test Statistics[a]	
	Control
Mann-Whitney U	678.000
Wilcoxon W	2508.000
Z	-5.898

Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Test	

Source: Research Data from SPSS software

It can be seen in Table 5 that the Sig value obtained from the average between the Mindfulness Effectiveness scores of the experimental group before and after the intervention was 0.000 < a significance level of 95% (0.05). It showed that the Mindfulness Effectiveness scores of the experimental group before and after the intervention differed significantly. This section analyzes the second research question, which investigated whether there was a significant difference in the mindfulness effectiveness of the control group before and after the intervention period. The control group did not participate in the Buddhist meditation retreat or receive the Art of Mindful Living Education. However, the results of the Mann-Whitney U test indicate otherwise. The U value was 678.000, the Wilcoxon W value was 2508.000, the Z score was -5.898, and the Asymptotic Significance (2-tailed) was 0.000. Since the p-value is lower than the 0.05 threshold, it shows a statistically significant difference between the pre-and post-test mindfulness scores of the control group.

Though to a lesser degree, the control group also showed significant changes in mindfulness levels. While they did not undergo formal intervention, items such as:

> "I try to observe my feelings and thoughts without judgment" (Item 4)
> "I take time to pause and reflect before making decisions" (Item 9)

It showed moderate improvement. It may reflect external factors such as developmental growth, environmental exposure to mindfulness concepts, or indirect peer influence. However, these changes were neither as consistent nor impactful as those in the experimental group. The change was less significant ($Z = -5.898$, $p < .000$) than the experimental group's. While students in the control group showed slight increases in scores for items such as:

> "I try to observe my feelings and thoughts without judgment,"
> "I take time to pause and reflect before making decisions,"

These improvements are likely due to natural emotional development, peer influence, or environmental factors, rather than structured training. The control group lacked consistency across questionnaire items, and intensive intervention did not support their increase in mindfulness. At first glance, this result may appear contradictory. In a typical quasi-experimental design, it is expected that the control group, especially one not exposed to the intervention, would maintain relatively stable levels of the outcome variable. However, a significant increase in mindfulness effectiveness in the control group suggests the possibility of other influencing factors. One plausible explanation is external environmental influence. Although students in the control group did not receive the formal retreat training, they may have been incidentally exposed to mindfulness concepts through school activities, discussions with peers, digital media, or general societal awareness.

A Comparative Test of Mindfulness **Effectiveness of Compassion Between Experimental and Control Groups Before Intervention.**

The results regarding the comparison test between the values of the two methods can be seen in the following table.

Table 6. A Comparative Test of Mindfulness Effectiveness of Compassion between Experimental and Control Groups Before Intervention

Test Statistics[a]	
	PreY
Mann-Whitney U	1607.500
Wilcoxon W	3437.500
Z	-1.013
Asymp. Sig. (2-tailed)	.311
a. Grouping Variable: Group	

Source: Research Data from SPSS software

It can be seen in Table 6 that the Sig value obtained from the average between the Mindfulness Effectiveness scores between the experimental group and the control group before the intervention was 0.311 > a significance level of 95% (0.05). It showed that the Mindfulness Effectiveness scores between the experimental and control groups before the intervention did not differ significantly. This section addresses the third research question: Was there a significant difference in the effectiveness of compassion in mindfulness between the experimental and control groups before the intervention? This analysis aimed to establish whether the two groups were comparable in their baseline levels of mindfulness-related compassion before the Buddhist meditation retreat and mindful living intervention.

The results of the Mann-Whitney U test revealed a U value of 1607.500, a Wilcoxon W value of 3437.500, a Z score of -1.013, and an Asymptotic Significance (2-tailed) value of 0.311. Since this p-value is more significant than the significance level of 0.05, we conclude there was no statistically significant difference between the experimental and control groups in their mindfulness-related compassion before the intervention. The results showed no significant difference in pre-intervention mindfulness levels between the two groups, as evidenced by similar baseline responses across most items in Part A. For instance:

> "I am aware of my thoughts without getting lost in them" (Item 1)
> "I am mindful of how my actions affect others" (Item 8)

Both groups scored similarly, confirming that participants began from a comparable level of mindfulness and supporting the internal validity of the experimental design. The Mann-Whitney U test revealed no significant difference between the two groups before the intervention (U = 1607.500, p = .311). It confirms that both groups started at a comparable level in mindfulness and compassion across items such as:

> "I am aware of my thoughts without getting lost in them,"
> "I feel concern when I see someone suffering."

This baseline similarity strengthens the internal validity of the experimental design, confirming that any later differences are due to the intervention. This result is critical in establishing the validity and fairness of the experimental design. There is a lack of significant difference in the pretest protestants, as both groups started from a

relatively equal baseline regarding compassion-based mindfulness. It is essential in experimental research, particularly when evaluating the effectiveness of an intervention, as it rules out the possibility that post-test differences are merely the result of pre-existing disparities rather than the effect of the intervention itself.

A Comparative Test of Mindfulness Effectiveness of Compassion between An Experimental Group and a Control Group After Intervention

The results regarding the comparison test between the values of the two methods can be seen in the following table.

Table 7. Comparison Test of Mindfulness Effectiveness of Compassion between the Experimental Group and the Control Group Before Intervention.

Test Statistics[a]		
	PreY	PostY
Mann-Whitney U	1607.500	1369.000
Wilcoxon W	3437.500	3199.000
Z	-1.013	-2.271
Asymp. Sig. (2-tailed)	.311	.023
a. Grouping Variable: Group		

Source: Research Data from SPSS software

It can be seen in Table 5 that the Sig value obtained from the average between the Mindfulness Effectiveness of compassion scores between the experimental group and the control group before the intervention was 0.023 < a significance level of 95% (0.05). It showed that the Mindfulness Effectiveness of compassion scores between the experimental and control groups after the intervention differed significantly. The fourth research question in this study aimed to determine whether there was a significant difference in the effectiveness of compassion in mindfulness between the experimental and control groups after the intervention. This comparison is essential to assess the impact of the Buddhist meditation retreat and Art of Mindful Living Education program on students' capacity for mindfulness and compassion.

The results from the Mann-Whitney U test indicated a U value of 1369.000 and a Wilcoxon W value of 3199.000, with a Z score of -2.271. Most importantly, the Asymptotic Significance (2-tailed) value was 0.023, less than the 0.05 significance level. The post-intervention data revealed a significant difference between the two groups, with the experimental group showing higher levels of mindfulness. Items like:

> "When I am angry or upset, I notice my emotions without reacting immediately" (Item 3)
> "I believe in treating all living beings with kindness and respect" (Item 20, reflecting compassionate mindfulness)

Illustrated the comprehensive growth in the experimental group. These gains demonstrate that the structured, spiritually integrated program enhanced attention and awareness and deepened ethical and compassionate mindfulness. After the intervention, the experimental group significantly outperformed the control group in mindfulness and compassion (U = 1369.000, p = .023). It was especially evident in items such as:

> "I believe in treating all living beings with kindness and respect."
> "I listen with care when someone shares their problems with me,"

"I return my attention to the present moment when I get distracted."

These findings show the retreat's impact in cultivating ethical awareness, emotional clarity, and presence—hallmarks of Buddhist mindfulness education. It demonstrates a statistically significant difference between the two groups post-intervention compassion-related mindfulness scores. The experimental group, which received the full retreat-based intervention, showed significantly higher levels of mindfulness and compassion than the control group. This result confirms the effectiveness of the intervention in enhancing students' mindfulness-based compassion. The finding gains further credibility when considered alongside the pre-intervention results, which showed no significant difference between the groups ($p = .311$). This shift from statistical similarity to a meaningful post-intervention difference suggests that the intervention, rather than any pre-existing condition, caused the change.

DISCUSSION

A **Comparative** Test of Mindfulness Effectiveness of Experimental Groups Before and After the Intervention

The findings showed that the immersive approach differs from many secular school-based mindfulness programs by embedding mindfulness within a holistic and ethical lifestyle framework, not just as a cognitive strategy but as a way of being. The observed improvement aligns with findings from Kabat-Zinn (2003), who emphasized that mindfulness practice, when applied regularly and with intention, leads to increased self-awareness, emotion regulation, and mental resilience. Although Kabat-Zinn's model, Mindfulness-Based Stress Reduction (MBSR), is secular, its roots draw heavily from Buddhist principles, reinforcing the relevance of traditional methods in this study. Furthermore, the retreat format allowed students to engage in extended, uninterrupted mindfulness practice, which likely contributed to the depth of their transformation. Previous studies have shown that retreat-based mindfulness interventions can produce more profound outcomes than short, classroom-based programs. For example, Shapiro et al. (2008) reported that university students who attended mindfulness retreats showed significant improvements in psychological well-being, attention, and emotional regulation, outperforming those who participated in brief weekly sessions. The Mann-Whitney U test in this analysis is appropriate, particularly given the small sample size or potential violations of normality assumptions. This test ranks all observations and examines differences in distributions between two independent or related samples. It provided a robust, non-parametric approach to evaluating the mindfulness score change in this context. The sizeable negative Z value (-6.360) suggests an intense directional change, with post-test scores significantly higher than the pretest of the experimental group.

These findings are also congruent with research by Bluth & Eisenlohr-Moul (2017), who demonstrated that adolescents participating in mindfulness and self-compassion interventions reported improvements in emotional well-being, reduced stress, and increased present-moment awareness. Adolescence is a developmental period marked by emotional turbulence and identity formation. Introducing structured mindfulness at this stage can be powerful for emotional grounding and cognitive clarity. In this study, the respondents were Buddhist students, which brings an additional layer of

cultural and spiritual relevance. Unlike secular programs that may feel disconnected from students' personal beliefs or practices, this intervention was culturally congruent, drawing from the participants' religious traditions. This cultural alignment likely enhanced the internalization and effectiveness of the mindfulness practices.

Integrating Buddhist ethical teachings into the intervention also added depth to the practice. Instead of using mindfulness as a technique for attention control, it was framed as an ethical and compassionate lifestyle. This integration reflects the views of Roeser et al. (2012), who argue that mindfulness in education must include moral and relational dimensions to transform students' character and behavior. Moreover, the retreat's structure will emphasize mindful eating, walking, silence, deep listening, and community sharing, allowing participants to apply mindfulness during formal meditation and daily activities. This approach mirrors Thich Nhat Hanh's Art of Mindful Living, which teaches that mindfulness should permeate every action, encouraging presence, gratitude, and compassion. By embedding these values into the retreat, students could experience mindfulness as a way of life, not just a technique.

The significant results suggest that this education may contribute to broader outcomes beyond individual mindfulness scores. Students who become more mindful are often better at managing stress, reducing impulsivity, improving relationships, and making ethical decisions. These potential spillover effects warrant further investigation in future studies. The implications of these findings are profound for educational settings, particularly religious and character-based schools. While mindfulness is often secularized in Western education, this study shows the value of returning to spiritually rooted, culturally sensitive models. For Buddhist students, incorporating meditation and ethical living grounded in their tradition may be more impactful than imported models stripped of their moral and spiritual foundations. It addresses critiques from researchers like Grossman (2015), who cautioned against 'McMindfulness' a trend of commercializing and decontextualizing mindfulness.

In terms of practical application, this research supports integrating mindfulness retreats or intensive workshops into school programs, especially within religious or moral education curricula. Though logistically more demanding than classroom instruction, the retreat format fosters a more profound transformation. Schools or communities aiming to develop students' inner awareness, emotional intelligence, and compassion may benefit from adopting similar retreat-based, culturally aligned models. Finally, while the short-term benefits are clear, future research should explore the long-term impact of such interventions. Follow-up studies could assess whether improvements in mindfulness are sustained over time and whether they translate into behavioral changes, academic performance, or social-emotional development. Qualitative methods such as interviews, focus groups, or journals could offer deeper insights into students' lived experiences and the personal meaning they ascribe to the practice.

In conclusion, the Mann-Whitney U test showed a significant difference in mindfulness effectiveness scores in the experimental group before and after participating in a Buddhist mindfulness retreat. This finding demonstrates that combining Buddhist meditation and the Art of Mindful Living can be a powerful and culturally relevant intervention for enhancing adolescent mindfulness. The study

aligns with previous research while contributing a unique spiritual and retreat-based approach, highlighting the potential for transformative education that unites mind, heart, and ethical awareness. Mindfulness Effectiveness in the Experimental Group (Before and After Intervention): The experimental group showed a statistically significant increase in mindfulness scores after participating in the retreat. It indicates that the structured retreat which included meditation, mindful breathing, walking, eating, silence, and ethical teachings effectively enhanced the students' ability to focus attention, regulate emotions, and be present in daily life.

Comparison Test of Mindfulness Effectiveness of Control Groups Before and After Intervention

The findings showed that a significant increase in mindfulness effectiveness in the control group suggests the possibility of other influencing factors. One plausible explanation is external environmental influence. Although students in the control group did not receive the formal retreat training, they may have been incidentally exposed to mindfulness concepts through school activities, discussions with peers, digital media, or general societal awareness. Although students in the control group did not receive the formal retreat training, they may have been incidentally exposed to mindfulness concepts through school activities, discussions with peers, digital media, or general societal awareness. As Roeser et al. (2012) observed, adolescents today are increasingly exposed to mental health and emotional wellness resources, even outside structured programs. This widespread access could influence mindfulness-related behaviors indirectly.

Another possible explanation is the passive diffusion of intervention. In school-based studies, control groups often interact with peers in the experimental group. In this case, students who attended the retreat may have shared their experiences with others, either through conversation or behavior. It can lead to indirect learning, where even those who did not formally participate begin to adopt similar practices. Such spillover effects are well-documented in educational research, where interventions tend to influence a broader environment than intended (Shapiro et al., 2008). Moreover, natural developmental progression could also contribute to the observed change. Adolescents are at a stage of life characterized by emotional turbulence, identity formation, and increasing self-awareness. According to Bluth & Eisenlohr-Moul (2017), even without formal mindfulness training, adolescents often exhibit improvements in emotional regulation as they mature and encounter varied experiences. This developmental process might be reflected in improved mindfulness scores, especially if the measurement tool is sensitive to such changes.

Additionally, the measurement tool itself may play a role. Since the researcher developed the questionnaire in this study, it may have captured subtle cognitive or emotional improvements that occurred naturally or through unintended exposure. The instrument's sensitivity to change, especially among adolescents, could lead to measurable score differences even without structured intervention. Interestingly, this finding supports a broader understanding of mindfulness as a naturally emerging capacity, especially in environments that encourage introspection and emotional awareness. As Kabat-Zinn (2003) argues, mindfulness is an innate human quality that can be cultivated through formal meditation and life experiences that promote presence, understanding, and self-inquiry.

It does not suggest that structured interventions like the Buddhist retreat are ineffective. On the contrary, the experimental group's magnitude and depth of change are expected to be more significant and consistent. However, the control group's improvement reminds us that mindfulness can arise through multiple pathways, particularly in educational environments

that are emotionally supportive and socially interactive. Theoretically, this outcome illustrates the complexity of adolescent education research. Peer relationships, teacher influence, curriculum integration, social media, and family background interact with student development. Therefore, isolating the pure effect of an intervention requires careful control and interpretation. Future studies could include a third, no-exposure group to better differentiate between intervention, passive exposure, and developmental effects.

This finding also has important implications for educational practice. It suggests that even without formal programming, creating a mindful school culture that emphasizes compassion, present-moment attention, and ethical awareness can positively influence students' mental and emotional states. Teachers and peers who model mindfulness behaviors may indirectly shape the attitudes and responses of those around them, even without deliberate instruction. Nevertheless, it is essential to approach this result with critical caution. While statistically significant, the practical or clinical significance of the score difference remains to be evaluated. The effect size may be small, reflecting only minor shifts in perception or behavior. To confirm the depth of this change, future research should examine effect size calculations and possibly use qualitative methods such as interviews or reflection journals.

In conclusion, the significant improvement in the control group's mindfulness scores before and after the study period suggests that mindfulness can develop without direct intervention due to environmental, developmental, and social factors. However, this does not diminish the impact of the structured retreat, which offers an immersive and intentional framework for cultivating mindfulness. Instead, it highlights the need for comprehensive educational strategies considering formal and informal learning environments. Mindfulness Effectiveness in the Control Group (Before and After Intervention): Interestingly, the control group, which did not receive the intervention, also showed a significant but less substantial improvement in mindfulness scores. It may be due to natural developmental factors, peer influence, or exposure to mindfulness indirectly through their school environment.

A Comparative Test of Mindfulness Effectiveness of Compassion Between Experimental and Control Groups Before Intervention.

The findings showed that the baseline similarity strengthens the internal validity of the experimental design, confirming that any later differences are due to the intervention. This result is critical in establishing the validity and fairness of the experimental design. There is a lack of significant difference in the pretest protestants, as both groups started from a relatively equal baseline regarding compassion-based mindfulness. It is essential in experimental research, particularly when evaluating the effectiveness of an intervention, as it rules out the possibility that post-test differences are merely the result of pre-existing disparities rather than the effect of the intervention itself.

Theoretically, compassion is a core element of both mindfulness and Buddhist education. According to Kabat-Zinn (2003), mindfulness is not simply about attention and awareness; it is intrinsically tied to qualities such as empathy, kindness, and compassion. These elements are not merely outcomes of mindfulness practice but are embedded in the ethical foundation of traditional mindfulness training. In Buddhist practice, karuṇā (compassion) is inseparable from sati (mindfulness). The fact that the experimental and control groups had similar compassion scores before the intervention suggests they shared similar experiences or exposures to foundational

compassionate behaviors, perhaps shaped by standard cultural, religious, or educational settings.

Given that the participants were all Buddhist students in Palembang, it is reasonable to assume that many had prior exposure to teachings or environments that value and promote compassion. In Buddhist philosophy, teachings on the four immeasurables lovingkindness, empathetic joy, and equanimity are frequently introduced at a young age in family and community settings. As such, students may already have a foundational understanding or internalization of compassionate thinking, even before formal training or retreat experience. This baseline similarity is further supported by research from Roeser et al. (2012), who found that students in spiritually supportive or ethically grounded school environments often display naturally higher levels of compassion and prosocial behavior, regardless of whether they received structured interventions. Additionally, the social-emotional development phase of adolescents contributes to an increased sensitivity toward others' emotions and experiences, which may foster the natural development of empathy and compassion even without specific mindfulness education (Bluth & Eisenlohr-Moul, 2017).

Furthermore, the participants' shared school and religious background could partially explain the absence of significant differences in the pretest compassion scores. Being part of a community that promotes meditation, moral discipline, and communal activities may result in similar compassion-related attitudes and behaviors among students. According to Shapiro et al. (2008), adolescents who grow up in culturally aligned, ethically cohesive environments are more likely to show baseline emotional awareness and concern for others. In this context, the lack of a significant difference is not only statistically beneficial for establishing a solid foundation for the intervention but also speaks to the cultural strength of Buddhist ethical education. It reflects that compassion as a trait is already embedded in students' value systems, potentially through religious teachings, rituals, and social interactions within their communities.

From a methodological standpoint, this finding adds credibility to the internal validity of the research. If a significant difference had been found at the pretest stage, it would have complicated the interpretation of post-test outcomes, as the groups would not have been comparable. In quasi-experimental studies where randomization is not always possible, ensuring equivalence at baseline through pretest comparison tests is necessary to verify the intervention's effectiveness (Campbell & Stanley, 1963). Despite the encouraging implications of baseline similarity, it is essential to recognize that this result alone does not reflect the depth or practice of compassion. It indicates that students self-reported similar levels of compassionate mindfulness before the retreat. Future qualitative analysis, such as interviews or reflective journals, could provide richer data on how compassion is perceived, understood, and practiced in real-life contexts.

Another layer of complexity lies in how compassion was measured. Since the instrument used in this study was researcher-developed, its sensitivity and specificity in capturing the nuances of compassion may influence the findings. While the lack of a significant difference is statistically sound, it is essential to continuously validate such tools to ensure they reflect culturally appropriate definitions and expressions of

compassion. In light of these findings, the accurate measure of the intervention's effectiveness will emerge in the post-test comparisons, where we will observe whether the experimental group showed more significant gains in compassion-related mindfulness after the retreat experience. As previous studies suggest, structured mindfulness interventions—particularly those incorporating lovingkindness) and ethical mindfulness (Hanh, 1991) significantly enhances compassionate thinking and behavior (Neff & Germer, 2013). The fact that the experimental and control groups began with similar compassion levels creates a transparent and unbiased platform to assess the retreat's impact. If post-test scores show divergence, this can be attributed more confidently to the retreat intervention rather than pre-existing group differences.

In summary, the comparative test of mindfulness effectiveness of compassion between the experimental and control groups before the intervention revealed no significant difference, as indicated by a p-value of 0.311. This finding confirms the comparability of the two groups at baseline and supports the validity of the experimental design. It also reflects the influence of shared cultural and religious values in promoting foundational compassion among Buddhist adolescents. This result strengthens the argument that any significant changes in compassion observed after the intervention are likely due to the retreat program and not pre-existing group differences. Thus, it serves as a critical reference point for interpreting the impact of the Buddhist meditation retreat on students' mindfulness and compassion. Compassion-Based Mindfulness Before the Intervention (Between Groups): No significant difference existed between the experimental and control groups' compassion scores before the retreat. It confirmed that both groups started from a similar baseline and that the intervention was the key variable influencing the post-test outcomes.

A Comparative Test of Mindfulness Effectiveness of Compassion between An Experimental Group and a Control Group After Intervention

The findings showed that the components of the intervention were deeply rooted in Buddhist contemplative practices, including *Anapanasati* (mindfulness of breathing), *Vipassana* (insight meditation), and *Metta Bhavana* (lovingkindness) practices, which not only cultivate present-moment awareness but also emphasize emotional balance, empathy, and compassion toward oneself and others. According to Kabat-Zinn (2003), mindfulness promotes an inherently compassionate and non-judgmental state of awareness when practiced with intention and discipline. These attributes are reinforced through extended retreat settings, where individuals are immersed in sustained contemplative silence and guided ethical reflection. The significant improvement in the experimental group's compassion-related mindfulness is consistent with prior findings in mindfulness research. Neff & Germer (2013), in their evaluation of the Mindful Self-Compassion (MSC) program, reported that participants showed substantial increases in compassion and emotional resilience after undergoing mindfulness training. Similarly, Bluth & Eisenlohr-Moul (2017) found that adolescents who participated in self-compassion interventions experienced improved emotional regulation and empathy.

The retreat model used in this study played a key role in achieving this outcome. As Shapiro et al. (2008) emphasized, immersive mindfulness experiences provide a conducive environment for deeper internalization of values such as compassion and equanimity. Unlike brief, classroom-based mindfulness sessions, the retreat allowed for deep engagement in practice, minimized distractions, and encouraged peer support and shared silence—all of which enhanced the learning process. In addition, the program incorporated teachings from Thich Nhat Hanh's Art of Mindful Living, which grounds mindfulness in ethical living, gentle speech, mindful consumption, and interbeing (the recognition of deep connections between all living beings). These elements of mindfulness go beyond individual awareness and extend into interpersonal compassion and social responsibility. As a result, students learned to regulate their emotions but also to care deeply for the well-being of others, a hallmark of compassion-focused mindfulness.

This significant result also demonstrates the strength of spiritually integrated mindfulness education, especially for students within a Buddhist cultural context. Unlike secular mindfulness programs that often strip mindfulness of its ethical and spiritual roots, this intervention maintained the authentic Buddhist framework, making the practice more personally meaningful and spiritually resonant for the participants. As Grossman (2015) critiqued, the 'McMindfulness' movement tends to commercialize mindfulness as a productivity tool, overlooking its moral and relational foundations. This study offers a compelling counterpoint, showing that ethically grounded, culturally relevant mindfulness training leads to more profound and transformative outcomes.

From a psychological and developmental standpoint, this outcome also aligns with adolescent emotional development. Adolescents are in a phase marked by heightened sensitivity to social experiences and a developing capacity for empathy. By receiving training in mindful compassion, they are more likely to engage in prosocial behaviors, resolve conflicts peacefully, and foster meaningful relationships. Roeser et al. (2012) noted that mindfulness interventions incorporating compassion training can enhance adolescents' moral reasoning, emotional regulation, and academic engagement. This result also highlights a critical educational implication: mindfulness should not be taught without compassion. Fusing these two elements in a retreat-based model yields significant outcomes that benefit personal development and social cohesion. Schools interested in implementing mindfulness programs may benefit from incorporating compassion-based activities, reflective exercises, and value-oriented discussions into their curricula.

However, it is also worth noting that the control group, though not exposed to the retreat, showed changes in their pre-and post-test scores. As discussed earlier, this could be due to passive exposure or natural developmental progression. Yet, the magnitude and significance of a change in the experimental group were far more pronounced, indicating the added value of structured and immersive training. Regarding research design, the statistically significant post-test difference supports the validity of the intervention's impact. Since the groups were similar at baseline, and only the experimental group received the retreat-based intervention, the improved compassion scores can be confidently attributed to the program. It underscores the

causal effect of mindfulness training in enhancing emotional and ethical capacities among youth.

Finally, this outcome opens avenues for future research. Longitudinal studies can investigate whether these improvements in compassion persist over time. Moreover, mixed-methods approaches can complement quantitative findings with qualitative insights, such as student reflections, interviews, or case studies. Exploring how students personally relate to compassion and apply it in real-world settings could provide a deeper understanding of how mindfulness shapes their behavior and identity. The significant difference in post-intervention compassion scores between the experimental and control groups demonstrates that the Buddhist meditation retreat and art of mindful living education had a measurable and meaningful impact on students' mindfulness effectiveness of compassion. This result confirms the intervention's success and supports previous research emphasizing the importance of ethically grounded, immersive mindfulness training. The findings suggest mindfulness can profoundly influence adolescent development, fostering emotional resilience, empathy, and moral sensitivity in future generations when integrated with compassion and delivered in culturally aligned formats. Compassion-based mindfulness after the intervention (between groups): The experimental group scored significantly higher in compassion effectiveness than the control group after the intervention. This result demonstrated that the retreat and mindful living education nurtured compassion, empathy, and ethical sensitivity, key aspects of mindfulness in Buddhist teaching.

CONCLUSION

This study explored how to manage student development through the impact of a Buddhist meditation retreat and the art of mindful living education on students' mindfulness effectiveness of compassion. The findings from the four research questions provide strong evidence of the intervention's effectiveness. *First*, the comparative test within the experimental group before and after the intervention showed a statistically significant increase in mindfulness effectiveness. It indicates that the structured retreat and mindfulness training directly impact the participants' awareness, attention regulation, and emotional presence. *Second*, the control group demonstrated a significant difference in pre- and post-test mindfulness scores, although they did not receive the intervention. This unexpected result suggests that external factors such as peer influence, digital exposure to mindfulness content, or natural emotional development may have contributed to their improvement. However, the magnitude of change was likely more minuscule and less structured than that of the experimental group. *Third*, comparing the experimental and control groups before the intervention showed no significant difference in mindfulness-related compassion scores. This finding confirms that both groups started from a similar baseline, supporting the internal validity of the research design and ensuring that any post-test differences were likely due to the intervention itself. Fourth, the post-intervention comparison revealed a significant difference between the groups, with the experimental group scoring higher in mindfulness effectiveness of compassion. This demonstrates the efficacy of the Buddhist meditation retreat and mindful living program in fostering awareness and compassion, both core elements of mindfulness in traditional Buddhist philosophy. Despite these promising results, the study had several limitations. First, the sample was limited to Buddhist junior and senior high school students, which may restrict the generalizability of the findings. Second, the researcher

developed the mindfulness and compassion questionnaires and, although validated through expert review, may lack the psychometric rigor of widely standardized tools. Third, potential contamination between groups, especially in school environments, could have influenced the control group's outcomes.

This study demonstrated the positive impact of a Buddhist meditation retreat and the art of mindful living education on students' mindfulness and compassion. However, several limitations should be acknowledged. The study was conducted only among Buddhist junior and senior high school students, which may limit the generalizability of the results to other populations or cultural contexts. Additionally, the researcher developed the mindfulness and compassion questionnaires, which may lack the psychometric reliability of standardized tools, while reviewing them for content validity. Another limitation is the potential for contamination between the experimental and control groups due to their shared school environment, where informal peer interactions could have influenced the control group's outcomes. Based on these findings, it is recommended that mindfulness-based programs grounded in cultural and ethical values be integrated more broadly into educational settings, especially in schools with religious or moral curricula. Future research should include more diverse participant groups and adopt longitudinal designs to explore the sustained impact of such interventions. Using mixed methods, including qualitative tools like student interviews or journals, would provide deeper insights into students' mindfulness experiences. Lastly, further refinement and validation of assessment tools would strengthen future studies and enhance the reliability of findings.

Acknowledgement: This study was supported and funded by the Institute for Research and Community Service (LPPM) of STIAB Jinarakkhita Lampung under Grant No. 001/LPPM. P/STIAB-J/X/2023

REFERENCES

Bluth, K., & Eisenlohr-Moul, T. A. (2017). Response to a mindful self-compassion intervention in teens: A within-person association of mindfulness, self-compassion, and emotional well-being outcomes. *Journal of Adolescence*, *57*(1), 108–118. https://doi.org/https://doi.org/10.1016/j.adolescence.2017.04.001

Bronfenbrenner, U. (2005). Making human beings human: Bioecological perspectives on human development. In *Making human beings human: Bioecological perspectives on human development.* Thousand Oaks, CA: Sage Publications Ltd. Retrieved from https://psycnet.apa.org/record/2004-22011-000

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and Quasi-Experimental Designs for Research*. Boston: Houghton Mifflin Company.

Casel. (2013). *Effective Social and Emotional Learning Programs (Preschool and Elementary School Edition)* (12th ed., Vol. 9; Jessy Newman, Sophia Solar, John Payton, Peter Ji, Adena Meyer, Kay Ragozzino, … Claire Christensen, Eds.). Chicago, USA: Collaborative for Academic, Social, and Emotional Learning.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design & Analysis Issues for Field Settings*. Michigan: Houghton Mifflin.

Creswell, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th ed.). Pearson Education.

Davidson, R. J., & McEwen, B. S. (2012). Social influences on neuroplasticity: stress and interventions to promote well-being. *Nature Neuroscience*, *15*(5), 689–695. https://doi.org/10.1038/nn.3093

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). *The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based*

Universal Interventions (Vol. 82). Chicago, USA. https://doi.org/https://doi.org/10.1111/j.1467-8624.2010.01564.x

Grossman, P. (2015). Mindfulness: Awareness Informed by an Embodied Ethic. *Mindfulness*, *6*(1), 17–22. https://doi.org/10.1007/s12671-014-0372-5

Gunaratana, H. (2002). *Mindfulness in Plain English* (Rev.). Wisdom Publications.

Hanh, T. N. (1991). *Peace is Every Step: The Path of Mindfulness in Everyday Life*. New York: Bantam Books.

Hattie, J. A. C. (2009). *Visible learning: a synthesis of meta-analyses relating to achievement*. New York, USA: Routledge. Retrieved from https://inspirasifoundation.org/wp-content/uploads/2020/05/John-Hattie-Visible-Learning_-A-synthesis-of-over-800-meta-analyses-relating-to-achievement-2008.pdf

Hoy, W. K., & Miskel, C. G. (2012). *Educational Administration: Theory, Research, and Practice* (9th ed.). New York, USA: McGraw-Hill Higher Education.

Jazaieri, H., Jinpa, G. T., McGonigal, K., Rosenberg, E. L., Finkelstein, J., Simon-Thomas, E., … Goldin, P. R. (2013). Enhancing Compassion: A Randomized Controlled Trial of a Compassion Cultivation Training Program. *Journal of Happiness Studies*, *14*(4), 1113–1126. https://doi.org/10.1007/s10902-012-9373-z

Kabat-Zinn, J. (1994). *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. Hachette Books.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016

Kemeny, M. E., Foltz, C., Cavanagh, J. F., Cullen, M., Giese-Davis, J., Jennings, P., … Ekman, P. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion*, *12*(2), 338–350. https://doi.org/10.1037/a0026118

Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. Minnessota, USA: The Wallace Foundation.

Louis, K. S., Dretzke, B., & Wahlstrom, K. (2010). How does leadership affect student achievement? Results from a national US survey. *School Effectiveness and School Improvement: International Journal of Research, Policy and Practice*, *21*(3).

Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, Virginia, USA: ASCD.

Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., … Saltzman, A. (2012). Integrating Mindfulness Training into K-12 Education: Fostering the Resilience of Teachers and Students. *Mindfulness*, *3*(4), 291–307. https://doi.org/10.1007/s12671-012-0094-5

Neff, K. D., & Germer, C. K. (2013). A Pilot Study and Randomized Controlled Trial of the Mindful Self-Compassion Program. *Journal of Clinical Psychology*, *69*(1), 28–44. https://doi.org/https://doi.org/10.1002/jclp.21923

Roeser, R. W., Skinner, E., Beers, J., & Jennings, P. A. (2012). Mindfulness Training and Teachers' Professional Development: An Emerging Area of Research and Practice. *Child Development Perspectives*, *6*(2), 167–173. https://doi.org/https://doi.org/10.1111/j.1750-8606.2012.00238.x

Salzberg, S., & Kabat-Zinn, J. (1995). *Lovingkindness: The Revolutionary Art of Happiness*. Shambhala Publications.

Seligmen, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being* (4th ed.). New York, USA: First Free Press. Retrieved from https://scottbarrykaufman.com/wp-content/uploads/2015/01/Seligman-2011-Chapter-1.pdf

Shapiro, S. L., Brown, K. W., & Astin, J. A. (2008). *Toward the Integration of Meditation into Higher Education: A Review of Research*.

Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). Mindfulness-based interventions in schools—a systematic review and meta-analysis. *Frontiers in Psychology*, *5*(603), 1–20.