



IJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** V **Month of publication:** May 2023

DOI: <https://doi.org/10.22214/ijraset.2023.51776>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com



Mindfulness among Young Adults and its Relation to Personal Growth

Neha Poonacha¹, Dr. Kiran Babu²

¹Semester II, M.Sc. Clinical Psychology, Kristu Jayanti College, Autonomous, Bengaluru, Karnataka, India.

²Assistant Professor, Department of Psychology, Kristu Jayanti College, Autonomous, Bengaluru, Karnataka, India.

Abstract: *The purpose of this study was to look at the relationship between Mindfulness and Personal Growth Initiative among young adults. The participants were 167 college students ($N_{male} = 80$, $N_{female} = 87$) across Karnataka. The data was collected using the Mindfulness Attention Awareness Scale and the Personal Growth Initiative Scale II. Pearson's Correlation Coefficient and Stepwise Linear Regression were used to analyze the data in SPSS. The results showed a significant positive correlation between Mindfulness and Intentional behavior and Planfulness. The stepwise linear regression analysis revealed that Intentional Behavior was a key predictor of Mindfulness. The study highlights the importance of considering the multidimensionality of personal growth when examining its relationship with mindfulness. Interventions aimed at increasing mindfulness should focus on addressing personal growth. The present study provides insight into the relationship between mindfulness and personal growth and highlights the need for further research to fully understand the complex interplay between these variables.*

Keywords: *Mindfulness, and Personal Growth Initiative*

I. INTRODUCTION

A. Mindfulness

Mindfulness is an intentional practice of being attentive and aware of one's surroundings and to acknowledge and accepting their experiences without biases. It is important to understand that mindfulness is not limited to one's mental state but further expands to their physical and emotional state too with relation to the present.

Mindfulness is generally defined as a psychological state of being through which one is attentive and non-judgementally aware of the present moment (Kabat-Zinn, 2015; Malinowski & Lim, 2015; Slutsky, Rahl, Lindsay, & Creswell, 2017) and accepts the inner subjective mental experience such as feelings, thoughts, sensations, perceptions, hopes, dreams, beliefs and attitudes (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). In Self-determination theory (1980s) by Richard M. Ryan and Edward L. Deci mindfulness can enhance feelings of autonomy, competence, and relatedness, which are important for psychological well-being. They proposed that when these feelings are fulfilled, individuals are more likely to be motivated, engaged, and satisfied with their lives. Individuals with greater mindfulness have greater resilience and, consequently, greater satisfaction with life (Bajaj et al., 2016). It can be understood that this concept is not limited to a particular activity, it has a broader spectrum of consciously living one's life, being more attentive to daily activities and one's thoughts. The recent trends focus on digital mindfulness where technology plays a major role in our daily lives now there has been an increase in digital mindfulness offerings, such as meditation apps, online courses, and virtual reality experiences. There has been a growing interest in applying mindfulness to specific populations, such as children, athletes, and individuals with chronic pain or mental health conditions. This paper will be focusing on a specific population who are young adults, to understand how the presence of mindfulness can influence motivation and growth.

A self-reported multidimensional assessment on 70 college students said that they experienced more positive affect when they actively lived in the moment nonjudgmentally (Blanke et al., 2017). Mindfulness reduced rumination about work when at home, and increased satisfaction with work and sleep quality (Crain et al., 2017). Practicing mindfulness is quite important, one can't simply attain mindfulness with consciously practicing the same. A 2-week smartphone-based mindfulness intervention with 153 community adults showed positive results for reducing loneliness and increasing social contact (Lindsay et al., 2019). Results of cross-sectional analyses indicated that educators' mindfulness had strong, consistent negative associations with three emotional exhaustion, depersonalisation, and low personal accomplishment; it also promotes resilience in educators and may foster healthy educators, classrooms, and students (Abenavoli et al., 2013). With the presence of mindfulness factors, one's self efficacy, confidence and motivation tends to increase. To understand more about this concept and its influence on a person's self development, this variable is paired with personal growth.



B. Personal Growth Initiative

Personal growth is the journey of improving oneself to achieve specific goals set. The generalization of the goals is to improve self which could lead to satisfaction in life. This can involve various areas like social, emotional, and physical. One taking initiative to do the same is action-oriented, they are open to new experiences and changes.

Personal Growth Initiative refers to an effective and purposeful engagement in the pursuit of one's personal growth, which includes changing specific aspects of an individual's life in order to attain set goals (Robitschek, 1998). Personal growth initiative is conceptualized as a personal resource that includes certain skills that help make changes so as to facilitate positive development (Weigold & Robitschek, 2011) and it is positively related to well-being (Freitas et al., 2016).

Personal Growth Initiative relates to the counseling process and tenets of change. Counseling inherently allows an individual to engage in personal growth (Robitschek et al., 2012), and their readiness for change and ability to be part of this process are fundamental factors of success in counseling (Prochaska & DiClemente, 2005). PGI has also been positively related to clients being in the action stage of change (Robitschek & Hersberger, 2005). Personal growth initiative is conceived as a personal resource that involves trainable skills (Weigold & Robitschek, 2011) and there are scientific attempts (Thoen & Robitschek, 2013) to manipulate personal growth initiative. Personal growth plays an important role in motivating and developing an individual's self-efficacy or efficiency. Personal growth among young adults is important for their journey to achieve their goals. Self-determination theory proposed that mindfulness could enhance autonomy, competence, and relatedness. If these are met, individuals tend to engage in behaviors that support personal growth and development. Intentional behavior involves being proactive and taking responsibility for one's own growth and development. Using resources for personal growth like educational materials, mentors, therapy etc can be an effective way to support intentional behavior. Planfulness involves setting specific, measurable, achievable, relevant, and time-bound goals, creating action plans, and actively tracking progress towards those goals. The process of initiative to change involves identifying areas for growth, setting goals, creating plans, and having the willingness to alter your behavior. In a recent study on Intersectionality exploring how personal growth initiative may vary based on individual differences such as gender, race, and cultural background.

Personal growth initiative and identity formation are important in promoting well-being during adolescence and young adulthood, specifically planfulness and intentional behavior (Luyckz et al., 2014). According to Wennberg et al (2013), cultural traits of institutional collectivism and uncertainty avoidance in a country moderate both how individuals' fear of failure and their self-efficacy impact, additionally changes in the cultural context may induce a change in how individuals with certain attributes behave. These two researchers talk about the influence of social/cultural factors in one's self development. Self-efficacy plays an important role in predicting overall Personal Growth Initiative, here intention behavior and effort plays a role without which, an individual cannot bring change in an intentional growth process (Sharma et al., 2013). Mindfulness might have some negative implications of readiness to change, a factor that falls under personal growth. Insufficient resources to act up change could be a major factor, mindfulness would have no role here (Gartner et al., 2013).

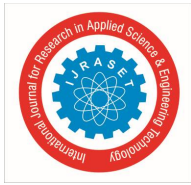
C. Mindfulness and its Relation to Personal Growth

Recent trends show how mindfulness and meditation practices are recognized as effective tools for personal growth and well-being. Incorporating mindfulness and meditation into daily routines acts as a way to reduce stress, increase self-awareness, and enhance overall well-being (Galante et al., 2023).

As mindfulness influences self-efficacy, motivation reduces negative cognitions. It is widely understood that these factors influence personal growth and development, especially among young adults as this is the critical age for them to strive into the models they wish to become. To further understand the influence of these two factors on each other the paper mainly focuses on the influence mindfulness has on growth.

According to Samuel et al (2021), the effect of embedding a combined mindfulness and growth mindset intervention students indicated that this combined approach increased students' math self-efficacy and reduced anxiety. Self-regulation may be one mechanism through which mindfulness promotes personal growth (Hwang et al., 2017).

Contradicting research has been found that states mindfulness requires more than the general capacity for self-regulation: it requires specific metacognitive beliefs that map onto this capacity and help guide how this capacity is utilized. (Reina & Kudesia et al., 2020). To further understand the influence of these two factors on each other the paper mainly focuses on the influence mindfulness has on growth.



II. METHODOLOGY

A. Objectives

- 1) To study the relationship between Mindfulness attention and initiative to personal growth among Young Adults
- 2) To study the influence of Mindfulness attention on initiative to personal growth of Young Adults

B. Hypotheses

- H1: There is a significant relationship between Mindfulness-attention and initiative to personal growth in Young Adults
H2: There is a significant influence of Mindfulness-attention on personal growth of Young Adults

C. Study design and participants

To investigate the relationship between Mindfulness and initiative to personal growth and the influence of mindfulness on personal growth in Young Adults, a Correlational Research Design was used.

Using a non-probability Convenient sampling strategy, (N= 167) individuals were identified across Karnataka, encompassing both males (N = 80) and females (N = 87). The data was collected throughout the months of March and April 2023. Participants had to be Indian citizens who were between the ages of 18-25.

D. Need and Significance of the Study

Investigations of human potential and well-being recently have focused on mindfulness-a unique quality of consciousness that is defined as being aware of one's thoughts and actions in the present moment. This study aims to see if there's a correlation between Mindful-attention and initiative for personal growth among young adults.

The findings of this study will hopefully contribute to the importance of the need for mindfulness for personal growth among individuals.

1) Inclusion criteria

- Participants aged between 18-25 currently studying.
- Participants aged between 18-25 currently working.

2) Exclusion Criteria

- Participants who are not currently pursuing anything and not belonging to an institution
- Anyone outside the age range of 18-25.
- Any participant diagnosed with a past or present psychiatric illness.

E. Procedure

The survey was done in the months of March-April 2023 via an online (Google Forms) self-report measure after obtaining informed permission from the participants.

Prior to participating in the study and allowing for the publication of results, the 167 participants were presented with an informed consent form outlining the study aims and methods. The data collected was coded in Microsoft Excel 2019 and then transferred to Statistical Software for Social Sciences (SPSS) 2.0 for analysis using descriptive statistics, Pearson correlation coefficient, and stepwise linear regression to test the hypotheses.

F. Variables (Operational Definitions)

Independent variable: Mindfulness

Dependent variable: Personal Growth Initiative

G. Measures

Personal Information- The questionnaire gathered general socio-demographic information, such as the participant's name, age, gender, current highest level of education, present area of residence, and nationality

Table 1: Tools Used

Measure	Items	Author and Year	Variables Assessed	Reliability and Validity	Model
Mindfulness Attention Awareness Scale	15	Creswell et al., 2004	Mindfulness	Internal consistency: Cronbach's alpha coefficients typically range from .80 to .90 Test-retest reliability: $r = .06$ to $.08$	1-factor model
Personal Growth Initiative	16	Robitschek et al., 2012	Personal Growth Initiative, Intentional Behavior, Planfulness, Using Resources, Readiness to change	Internal consistency: Cronbach's alpha coefficients range from .84 to .91	1 and 4-factor model

The measures were administered online, and participants were asked to respond honestly and to the best of their ability. The measures were chosen for their established social desirability validity and reliability, as well as their relevance to the research question.

III. RESULTS

This study aimed to examine the relationship between Mindfulness attention and initiative to personal growth among young adults. The sample included 167 participants between 18 and 25 years, residing in India. Data were collected using Google Forms, with the MAAS and PGIS-II as the assessment tools. The collected data were then entered into Microsoft Excel and exported to SPSS 2.0 for statistical analysis.

Table 2: Descriptive statistics – Mindfulness Attention Awareness, Readiness to Change, Planfulness, Using resources, Intentional Behavior, and Personal Growth Initiative

	Mindfulness	Readiness to change	Planfulness	Using Resources	Intentional Behavior	Personal Growth Initiative
Mean	3.64	3.40	3.24	2.96	3.43	3.26
Std. Deviation	.95		.99	1.21	.99	.86

Note- N=167

Descriptive statistics for five variables were computed based on a sample size of $N = 167$ participants. The variables included Mindful Attention Awareness ($M = 3.64, SD = .95$), Readiness to change ($M = 3.40, SD = .94$), Planfulness ($M = 3.24, SD = .99$), Using Resources ($M = 2.96, SD = 1.21$), Intentional Behavior ($M = 3.43, SD = .99$), and Personal growth Initiative ($M = 3.26, SD = .86$).

Table 3: Coefficients for Pearson Product Moment Correlation between Mindfulness and Readiness to Change, Planfulness, Using resources, Intentional Behavior, and Personal Growth Initiative

	Mindfulness	Readiness to Change	Planfulness	Using Resources	Intentional Behavior	Personal Growth Initiative
Mindfulness	1	.146	.167*	-.043	.168*	.122
Readiness to Change		1	.771**	.499**	.700**	.876**
Planfulness			1	.433**	.671**	.848**
Using Resources				1	.505**	.760**
Intentional Behavior					1	.853**
Personal Growth Initiative						1

Note: * $p < 0.05$; ** $p < 0.01$

Table 3 presents the correlation coefficients between Mindfulness and Planfulness, Intentional Behavior. The results indicated that Planfulness and Intentional Behavior were positively and significantly correlated with Mindfulness ($r = .167$ and $r = .168$, respectively, both $p < .05$). However, there was no statistically significant correlation between Mindfulness and Readiness to Change, Using resources, and Personal Growth Initiative.

Table 4: Stepwise Linear Regression to assess the impact of the initiative to change on academic procrastination

Model	Predictor Variable	B	SE	t-value	R ²	Adjusted R ²	F
1	Step 1				.028	.22	4.790
	Constant		.264	11.716			
	Intentional Behavior	.168	.074	2.189			

Note: $p < 0.01$ **, Dependant Variable- Mindfulness
 Note: Excluded Variables- Model 1(Planfulness),

Stepwise regression is a statistical technique that helps identify the subset of predictor variables that significantly contribute to the variance in the outcome variable. By selecting only significant predictors, the model can be simplified and more parsimonious, which is important when the sample size is limited. In addition, stepwise regression analysis can identify any multicollinearity or redundant predictors in the model, which can improve the accuracy and interpretability of the results. Overall, stepwise regression analysis can help identify the most important predictors of Mindfulness in relation to Personal Growth Initiative.

Table 4 displays the results of a stepwise linear regression analysis examining the dependent variable Personal Growth Initiative, and the predictor variables self-critical perfectionism and rigid perfectionism. For each step in the regression model, Table 4 reports the standardized beta coefficients (β), standard errors (SE), t-values, and R² values.

In Step 1, Intentional Behavior was entered as the only predictor variable. The results showed a significant positive association between Intentional Behavior and Mindfulness ($\beta = .168$, SE = .028, $t = 2.189$, $p < .05$), accounting for 2.8% of the variance in Mindfulness. Therefore, with each level increase in Intentional Behavior levels of Mindfulness, was increased by .168. The planfulness variable was excluded from this model.

IV. DISCUSSION

The aim of this study is to understand the relationship and influence between mindfulness and personal growth initiative. The results showed that Mindfulness was significant and positively correlated with Intentional behavior and planfulness. This finding is in line with the study by Luyckz et al in 2014, Personal growth initiative and identity formation are important in promoting well-being during adolescence and young adulthood, specifically planfulness and intentional behavior. Intentional behavior plays an important role in an individual's self-development. For one to reach their goals set, moving in a particular direction is a key factor. Being mindful of the same process acts as a supporting factor to be attentive toward the decisions taken to ensure perfectionism. Further having a blueprint i.e, mindfully planning every step of the way in advance influences the direction to personal growth.

However, unlike previous studies, no significant association between Mindfulness and readiness to change and using resources was found in this study. According to Gartner et al in 2013, Mindfulness might have some negative implications of readiness to change, a factor that falls under personal growth. Insufficient resources to act up on change could be a major factor; mindfulness would have no role here which in turn explains the inconsistency. Some of the factors responsible for these results could be insufficient data, and mediating factors like procrastination. Being mindful in the current moment could result in procrastinating or avoiding bringing changes in the present. Using resources cannot be applied in all instances of growth as the availability and accessibility of the same should be considered. Growth cannot be achieved smoothly if mindfulness isn't practiced with complete awareness. Thus, the practice of mindfulness involves the incorporation of strategies and tools that allow young people to face each stage with the highest possibilities of use, training, experience, and personal growth (Barrett, 2016; Wamsler, 2018; Helm, 2019). The Self-determination theory (SDT) talks about the three important aspects Autonomy, Competence and Relatedness. The reason for no correlation for using resources could be as one would avoid the same to feel in power of their work and not depend on others in order to feel competent and autonomy.

The stepwise linear regression analysis showed that a key predictor of Mindfulness is Initiative to change. From the data self-critical initiative to change accounted for 2.8% of variance in Mindfulness. The low model could be because of the low sample size (N=167) which is an important factor to prove the results obtained. Further outliers were present in the data set, they could be influenced by the factors like individual differences where it's necessary to understand that people differ in their levels of mindfulness and personal growth, some individuals naturally have higher or lower levels than others. Furthermore, the context in which this questionnaire was filled might affect their scores like the environment or their state of mind at that point of time.

V. CONCLUSION

This study offers insights in the association between mindfulness and personal growth, highlighting the significant role of intentional behavior as a predictor of mindfulness. These findings have important implications for developing interventions to alleviate personal growth and emphasize the importance of conducting further research to fully comprehend the intricate nature of personal growth and its relationship with mindfulness.

The present study has significant implications for understanding and addressing mindfulness. The results suggest that interventions aimed at mindfulness should focus on addressing personal growth initiative, specifically those related to using resources and readiness to change. The findings of this study have implications for both research and practice. In terms of research, the study highlights the importance of considering the multidimensionality of personal growth when examining its relationship with mindfulness.

REFERENCES

- [1] Abenavoli, R. M., Jennings, P. A., Greenberg, M. T., Harris, A. R., & Katz, D. A. (2013). Special Edition article: The protective effects of mindfulness against burnout among educators. *Psychology of Education Review*, 37(2), 57–69. <https://doi.org/10.53841/bpsper.2013.37.2.57>
- [2] Bajaj, B., & Pande, N. (2016). Mediating role of resilience in the impact of mindfulness on life satisfaction and affect as indices of subjective well-being. *Personality and Individual Differences*, 93, 63–67. <https://doi.org/10.1016/j.paid.2015.09.005>
- [3] Barrett, B. R., Grabow, M. L., Middlecamp, C. H., Mooney, M. M., Checovich, M., Converse, A. K., Gillespie, B., & Yates, J. (2016). Mindful Climate Action: Health and Environmental Co-Benefits from Mindfulness-Based Behavioral Training. *Sustainability*, 8(10), 1040. <https://doi.org/10.3390/su8101040>
- [4] Blanke, E. S., Riediger, M., & Brose, A. (2017). Pathways to happiness are multidirectional: Associations between state mindfulness and everyday affective experience. *Emotion*, 18(2), 202–211. <https://doi.org/10.1037/emo0000323>
- [5] Crain, T. L., Schonert-Reichl, K. A., & Roeser, R. W. (2017). Cultivating teacher mindfulness: Effects of a randomized controlled trial on work, home, and sleep outcomes. *Journal of Occupational Health Psychology*, 22(2), 138–152. <https://doi.org/10.1037/ocp0000043>
- [6] Freitas, P. P. C., Damásio, B., Tobo, P., Kamei, H., & Koller, S. (2016). Systematic review about personal growth initiative. *Anales De Psicologia*, 32(3), 770. <http://dx.doi.org/10.6018/analesps.32.3.219101>



- [7] Galante, J., Grabovac, A., Wright, M., Ingram, D. M., Van Dam, N. T., Sanguinetti, J. L., Sparby, T., Van Lutterveld, R., & Sacchet, M. D. (2023). A Framework for the Empirical Investigation of Mindfulness Meditative Development. *Mindfulness*. <https://doi.org/10.1007/s12671-023-02113-8>
- [8] Gärtner, C. (2013). Enhancing Readiness for Change by Enhancing Mindfulness. *Journal of Change Management*, 13(1), 52–68. <https://doi.org/10.1080/14697017.2013.768433>
- [9] Helm, S., & Subramaniam, B. (2019). Exploring Socio-Cognitive Mindfulness in the Context of Sustainable Consumption. *Sustainability*, 11(13), 3692. <https://doi.org/10.3390/su11133692>
- [10] Hwang, Y., Bartlett, B. J., Greben, M., & Hand, K. A. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teaching and Teacher Education*, 64, 26–42. <https://doi.org/10.1016/j.tate.2017.01.015>
- [11] Kabat-Zinn, J. (2015). Mindfulness. *Mindfulness*, 6(6), 1481–1483. <https://doi.org/10.1007/s12671-015-0456-x>
- [12] Lindsay, E. K., Young, S., Brown, K. W., Smyth, J. M., & Creswell, J. D. (2019). Mindfulness training reduces loneliness and increases social contact in a randomized controlled trial. *Proceedings of the National Academy of Sciences of the United States of America*, 116(9), 3488–3493. <https://doi.org/10.1073/pnas.1813588116>
- [13] Luyckx, K., & Robitschek, C. (2014). Personal growth initiative and identity formation in adolescence through young adulthood: mediating processes on the pathway to well-being. *Journal of Adolescence*, 37(7), 973–981. <https://doi.org/10.1016/j.adolescence.2014.07.009>
- [14] Malinowski, P., & Lim, H. J. (2015). Mindfulness at Work: Positive Affect, Hope, and Optimism Mediate the Relationship Between Dispositional Mindfulness, Work Engagement, and Well-Being. *Mindfulness*, 6(6), 1250–1262. <https://doi.org/10.1007/s12671-015-0388-5>
- [15] Mesmer-Magnus, J., Manapragada, A., Viswesvaran, C., & Allen, J. (2017). Trait mindfulness at work: A meta-analysis of the personal and professional correlates of trait mindfulness. *Human Performance*, 30(2–3), 79–98. <https://doi.org/10.1080/08959285.2017.1307842>
- [16] Prochaska, J. O., & DiClemente, C. C. (2005). The transtheoretical approach. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of psychotherapy integration* (pp. 147–171). Oxford University Press.
- [17] Reina, C. S., & Kudesia, R. S. (2020). Wherever you go, there you become: How mindfulness arises in everyday situations. *Organizational Behavior and Human Decision Processes*, 159, 78–96. <https://doi.org/10.1016/j.obhdp.2019.11.008>
- [18] Robitschek, C., & Hershberger, A. R. (2005). Predicting expectations about counseling: Psychological factors and gender implications. *Journal of Counseling & Development*, 83(4), 457–469. <https://doi.org/10.1002/j.1556-6678.2005.tb00367>
- [19] Robitschek, C., Ashton, M. W., Sperring, C. C., Geiger, N., Byers, D., Schotts, G. C., & Thoen, M. A. (2012). Development and psychometric evaluation of the Personal Growth Initiative Scale–II. *Journal of Counseling Psychology*, 59(2), 274–287.
- [20] Samuel, T. S., & Warner, J. (2021). “I Can Math!”: Reducing Math Anxiety and Increasing Math Self-Efficacy Using a Mindfulness and Growth Mindset-Based Intervention in First-Year Students. *Community College Journal of Research and Practice*, 45(3), 205–222. <https://doi.org/10.1080/10668926.2019.1666063>
- [21] Sharma, H. L., & R, R. (2013). Relationship of Personal Growth Initiative with Self-Efficacy among University Postgraduate Students. *ResearchGate*. https://www.researchgate.net/publication/322790453_Relationship_of_Personal_Growth_Initiative_with_Self-Efficacy_among_University_Postgraduate_Students
- [22] Thoen, M. A., & Robitschek, C. (2013). Intentional growth training: Developing an intervention to increase personal growth initiative. *Applied Psychology: Health and Well-Being*, 5(2), 149–170. doi:10.1111/aphw.12001
- [23] Wamsler, C., Brossmann, J., Hendersson, H., Kristjansdottir, R., McDonald, C. P., & Scarnipi, P. (2018). Mindfulness in sustainability science, practice, and teaching. *Sustainability Science*, 13(1), 143–162. <https://doi.org/10.1007/s11625-017-0428-2>
- [24] Weigold, I. K., & Robitschek, C. (2011). Agentic personality characteristics and coping: Their relation to trait anxiety in college students. *American Journal of Orthopsychiatry*, 81(2), 255–264. doi:10.1111/j.1939-0025.2011.01094.x
- [25] Wennberg, K., Pathak, S., & Autio, E. (2013). How culture moulds the effects of self-efficacy and fear of failure on entrepreneurship. *Entrepreneurship and Regional Development*, 25(9–10), 756–780. <https://doi.org/10.1080/08985626.2013.862975>



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)