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A study of the relationship between student's Learning Styles and Academic Procrastination at Secondary Level Learners

Musawwir Reza

Research Scholar (Education), MANUU CTE Darbhanga, Email: musawwirrezaphd020@gmail.com

Saddam Hussain Ahmad

TGT Teacher, Bihar Government, Email: saddamraza17@gmail.com

Md Asgar Ansari

School Teacher, Bihar Government, Email: mkalimasgar@gmail.com

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ABSTRACT

This paper discusses the student's learning styles and academic procrastination at secondary level students. This study focused on a sample of 120 Class IX students from secondary schools of Darbhanga district. To select the sample Researcher used simple random sampling technique. The descriptive survey method and quantitative research were used. The author developed a tool of Learning Styles Scale and Academic Procrastination for data collection. Mean, standard deviation and the Pearson's Product Moment Correlation were employed For the data analysis. The analysis of the data revealed that kinaesthetic learning emerged as the most dominant style, followed by visual learning, while auditory learning was found to be the least preferred among the three. It was also found that academic procrastination was moderate (M=3.30, SD=0.50). There was a inverse correlation (r = 0.42, p< 0.05) found between the student's learning styles and the academic procrastination, indicating that students with more effective learning styles tended to procrastinate less. Further analysis showed that of all the learning styles, the one with the strongest inverse correlation was the kinaesthetic learning style (r = -0.45) followed by visual learning style (r = -0.38) and

auditory learning style (r = -0.25); all significant at the 0.05 level. This study established that learning styles are significant for students' academic behaviour. Consequently, the study advocates for the incorporation of more activity-based and learner-centred approaches as a means of reducing procrastination and improving students' academic achievement. The findings of the study offer invaluable insights for educators, pupils, and curriculum planners concerning the importance of active learning strategies.

Introduction

The role Secondary education is integral to the development of students' academic engagement and learning self-regulation. Management of academic tasks is accompanied by increasing demands of the education system, and self-regulation is central to the development of time management and learning simultaneously. Educational research has identified the phenomenon of individual difference integration impact on the way learning is acquired and information is processed. A key variable, learning style, is of great importance when assessing students' involvement with academic materials. A learning style is an individual's preferred way of perceived, processed, or retained information. Fleming (2001) proposed the VARK model, where learners are classified into visual, aural, read/write, and Kinesthetic . Hailing from an experiential learning model framework, Kolb (1984) posited that learning is a process of integration. This is the reason individuals are more inclined towards a specific learning style. Such paradigms vis-a-vis learning illustrate and espouse the epistemic disposition towards learning, as it affects one's academic engagement and task management. Academic procrastination is a prevalent phenomenon that is an impediment to one's academic success. It is described as an intentional act of deferred completion of a task, even when the individual is aware of the potential inverse impact of that act (Steel, 2007). Failure to self-regulate one's time and task priorities is explained as the cause of procrastination (Ferrari, 1995). Academic procrastination has been proven to be an impediment to one's academic accomplishment, and has been associated with stress and poor health (Steel, 2007). The intersection of learning styles and academic procrastination is an area of interest that is gaining traction. Incompatible teaching methods can lead to poor comprehension, loss of interest, and resistance to completing school work. According to Coffield et al. (2004), teaching and learning inconsistencies can help the lack of students learning results. In contrast to the former scenario, students are likely to be mentally involved and tend to complete school work when the teaching methods are consistent with their preferred ways of learning. Secondary level

students are in a very important developmental stage as they are expected to start taking more control of their learning. The combination of preferred learning styles and the propensity to procrastinate can influence academic achievement. There is limited research on the combination of these variables and their impact within the parameters of schooling. The current research examines the correlation between learning styles and academic procrastination in Secondary level students. The results may aid in developing more sophisticated instructional models and interventions that will enhance academic performance and reduce procrastination. They will also help in addressing the problems of procrastination and academic achievement.

Review of Related Literature

Review is an essential component of any research study, as it provides a theoretical and empirical foundation for understanding the variables under investigation. The present section includes relevant studies related to the variables of the studies.

Kolb (1984) believes learning is a broad array of interactive experiences, and is centered around the experiential learning theory. His theory focuses on learning to be an individual and personal experience, rather than a group learning experience. Each individual develops his/her individual/acquisition modalities. His research explains why different individuals engage differently, along academic lines. Most of educational research has been dedicated to the study of the individual differences of learning. With this in mind, Fleming (2001) draws the VARK model. By this model, individual learners fit into one of four categories: visual, auditory, read/write, or partner (Kinesthetic) learners. Her research shows that when students' learning patterns and teachers' instructional patterns are aligned, students learn more. Many students' instructional patterns in instructional design students' are not aligned, a clear gap in Fleming's research. As an option, many of the students' instructional patterns in instructional design students' are not aligned. Most of the educational research has been dedicated to the study of individual differences in learning. Based on the model proposed by Fleming (2001) differing instructional techniques is advocated in educational research. Most of the research elucidating differing instructional research is based on Steel's (2007) model. Steel's meta-analysis on procrastination, shows procrastination is one of the leading causes of academic failure. Her research explains that dull academic requirements undermine students' motivation and instigate procrastination. Procrastination is the great academic evil. Procrastination and poor academic goal achievement are the end result of procrastination. Here, avoidance Behaviour is coupled with poor time management explaining academic procrastination. Tuckman (1991) has developed a scale designed to measure the academic procrastination of students. His

scale has been one of the more defining scales in educational research. Different styles of learning can be found in virtually every classroom. Grasha (1996) found that learning styles can enhance or decrease a student's motivation, participation, or interaction in a classroom. Furthermore, Grasha found that a significant reason for a student's underachieving is that the student's learning style is not compatible with the teacher's teaching style. Grasha concluded that there is a need for teaching styles that are designed based on the student's needs. Klassen, Krawchuk, and Rajani (2008) examined procrastination in adolescents, and the impact on school achievement. Klassen found that if the student has poor self-regulation, the student will tend to procrastinate more. Non-procrastination is critical for the achievement of a student, and this is a fact that needs to be accepted.

In India, Kaur and Kaur (2015) studied the relationships between Secondary level students' learning styles and academic achievement. The study concluded that students with well organized and suitable learning styles, achieved a higher level of academic success. The study also stated that teaching effectiveness can be heightened with learning styles awareness. These findings show the learning styles contribute to academic success. Sharma (2017) studied academic procrastination in Indian high school students. The study concluded that the majority of Indian high school students procrastinate to a moderate or higher degree, and that procrastination diminishes students' achievements in school. The study also stated that something needs to be done about procrastination. Rani and Jha (2018) studied learning styles in Secondary level students in Bihar. The study found that most students preferred visual and reachable learning styles, and that such preferences influenced their participation and comprehension in the classroom. The study stressed that teaching styles should be modified to cater for this. Kumar (2019) studied the relationship between adolescents' study habits and procrastination. Poor study habits were found to be a major contributor to higher levels of procrastination and academic procrastination, which was identified as a function of ineffective study routines, was found to be a frequent Behaviour of the students. The study found that the level of study habits determines the performance level. Balkis and Duru (2009) studied the relationship between academic procrastination and students' performance and motivation. The study found that procrastination is a inverse predictor of academic achievement as well as a major contributor for motivation loss to students. Procrastination students experience anxiety and poor performance. The study found that procrastination should be a concern in education. Yadav and Singh (2020) studied procrastination and Secondary level students in India. They stated that procrastination occurs due to unmotivated students and resultingly poor learning strategies. They also stated that students that learned better learned better were less likely to procrastinate. This gathered evidence shows that learning behaviours and procrastination are related. This means that learning

behaviours and procrastination are related. Yadav and Singh (2020) is the first study in the Indian context that examines the direct relation between learning styles and school procrastination. This is the first study to examines the direct relation between procrastination and learning styles among secondary students in India. This is the first study to examine the direct relation between learning styles and academic procrastination. This is the first to study examines the relationship system of inquiries that learning styles and academic procrastination. This is the first study in the Indian context that assesses learning styles and school procrastination.

Need and Significance of the Study

Secondary level students face increasing academic demands as they juggle new school and social responsibilities. The combination of new academic pressure and the growing competition for academic success can lead to these students experiencing stress, increasing the likelihood of procrastination (AVH, 2021). Many students struggle with academic procrastination, which can inversely affect their time management and mental health. Identifying why students procrastinate is important, and, in many cases, is related to the students' learning style. Learning/personal styles represent the different ways that students sense, process, and remember information, and when students' favoured styles do not match with the methods of instruction, it can lead to reduced comprehension, decreased motivation, and avoidance of academic tasks. Therefore, researching and understanding learning/personal styles can improve comprehension and assist students with Behavioural and psychological difficulties. The concern of the present study is to identify the problem of poor study habits and the lack of self-regulation. Procrastination is linked to ineffective planning, motivational deficits, and poor learning strategies. Additionally, the majority of previous research has addressed learning styles and procrastination as separate constructs. Teachers can use these findings to adapt their teaching methods to better tackle procrastination and foster engagement based on personal learning style preferences of students. Self-discovery of learning styles could help students adopt study techniques and organization methods conducive to completing academic responsibilities. Furthermore, the study can provide insight to policymakers and curriculum designers on how to implement learner-centered practices. Thereof, the study adds to the body of knowledge on the understudied connection between learning styles and academic procrastination and provides a framework for policymakers and educators to implement effective academic practices.

Objectives

1. To determine the most prevalent learning styles of Secondary level Learners.
2. To evaluate the extent of academic procrastination among Secondary level Learners.
3. To analyse the correlation between learning styles and academic procrastination among Secondary level learners.
4. To examine the correlation between various components of learning styles (visual, auditory, and kinaesthetic) and academic procrastination.
5. To analyse the extent to which learning styles predict academic procrastination among Secondary level learners.

Research Hypotheses

1. H_{01}: There will be no significant relationship between Learning style and Academic Procrastination among Secondary Level Learners.
2. H_{02}: There will be no significant relationship between the visual learning style and academic procrastination among Secondary Level Learners.
3. H_{03}: There will be no significant relationship between the auditory learning style and academic procrastination among Secondary Level Learners.
4. H_{04}: There will be no significant relationship between the kinaesthetic learning style and academic procrastination among Secondary Level Learners.

Methodology of the Study

Research Method

The research study uses a quantitative approach. To answer the research questions, the study employed the descriptive survey method to study learning styles and academic procrastination to Secondary level students. The method focuses on collecting data to identify and describe the systems and elements of a particular phenomenon. The research method examines and describes the relationships between the multiple variables.

Sample and Sampling Technique

The research study included 120 students of Class IX in secondary schools within the Darbhanga district. Participants were picked from diverse secondary school institutions to promote sample diversity. Respondents were chosen through simple random sampling. This method gave each student an equal opportunity of being selected in the research study, thus eliminating selection bias and increasing sample representativeness.

Research Tools

Researcher designed the following tools:

1. Learning Styles Scale (Self-developed)

To measure the dominant learning style among students (visual, auditory, or kinaesthetic), the researcher created a Learning Styles Scale. For this tool, the researcher created several items based on a Likert-type format. The tool was validated by experts in the subject area.

2. Academic Procrastination Scale (Self-developed)

The researcher developed a scale to measure academic procrastination among Secondary level students. Some of the items in the scale include the delay of task completion, poor time management, and avoidance of academic activities. For the scale, the researcher used a Likert-type scale, and the tool was tested for validity and reliability before the administration.

Statistical techniques

To analyse the data the researcher used Mean, SD and Pearson's Product Moment Correlation Coefficient(r)

Data Analysis and Interpretation

To achieve the focus of the current research, responses of Secondary level students data were analysed to determine their learning styles and academic procrastination. The analysis was based on the objective and hypotheses. Various statistical methods were used to ensure the findings were precise and clear. To analyse the data's center and spread, the mean and standard deviation were used, while relation analysis

was used to investigate the potential correlation between the dependent and independent variables. The findings, presented in tables, are further elaborated upon to facilitate comprehension.

Objective 1: To determine the most prevalent learning styles of Secondary level Learners.

Table 1 Mean and Standard Deviation of Learning Styles

Learning Style	N	Mean	SD
Visual	120	3.45	0.52
Auditory	120	3.20	0.48
Kinaesthetic	120	3.60	0.55

Interpretation

The data obtained for Secondary level students' different learning styles has means and standard deviations. The mean score for the kinaesthetic learning style (M = 3. 60) is greater than visual (M = 3.45) and auditory (M = 3. 20) learning styles, which means most students favour the kinaesthetic learning style. This learning style includes learning through physical activities, as well as practical and hand-on activities. The average scores for visual and auditory learning styles are lower than the kinaesthetic learning style, which means students do not prefer visual and auditory learning styles. The standard deviation is between 0.48 and 0.55, which means there is moderately low variability and not all students prefer the same learning style, although kinaesthetic is still the dominant style. This suggests students favour modes of learning that are more active and practical. This has great significance for teaching as students are more likely to engaged when activity-based learning and participatory approaches are used.

Objective 2: To evaluate the extent of academic procrastination among Secondary level Learners.

Table 2 Mean and Standard Deviation of Academic Procrastination

Variable	N	Mean	SD
Academic Procrastination	120	3.30	0.50

Interpretation

Table 2 summarizes grades 9-12 academic procrastination means and standard deviations. The mean score is 3.30 (moderate academic procrastination). Standard deviation (0.50) shows that although most

students have high academic procrastination, some students' Behaviour is above and some below that mean. Many secondary students experience some degree of academic procrastination, which may be due to ineffective time management, little motivation, or high learning frustration. An educator's focus should be to reduce procrastination through more effective time management strategies and guidelines.

Objective 3: To analyse the correlation between learning styles and academic procrastination among Secondary level learners.

H_{01}: There will be no significant relationship between Learning style and Academic Procrastination among Secondary Level Learners.

Table 3: Correlation between Learning Styles and Academic Procrastination

Variables	N	r-value	p-value	Level of Significance	Decision
Learning Styles & Procrastination	120	-0.42	0.01	Significant at 0.05	Rejected

Interpretation

The correlations between types of learning and academic procrastination among Secondary level students are detailed in Table 3. Given the correlation coefficient (r = -0.42), there is a moderate inverse relationship between the two variables. This means that students with more efficient learning styles are less likely to procrastinate academically. The p-value (0.01) is less than the 0.05 level of significance. This means that relationship is statistically significant. Thus, the null hypothesis claiming that no significant relationship exists between the two variables is proven wrong. This indicates that learning styles to a great extent determine students' academic conduct. Students who strategically approach learning are less likely to procrastinate, while learners who do not apply constructive learning strategies demonstrate greater academic procrastination. This means that learning styles among students should be promoted to alleviate the inverse impact of academic procrastination.

Objective 4: To examine the correlation between various components of learning styles (visual, auditory, and kinaesthetic) and academic procrastination.

H_{02}: There will be no significant relationship between the visual learning style and academic procrastination among Secondary Level Learners.

H_{03}: There will be no significant relationship between the auditory learning style and academic procrastination among Secondary Level Learners.

H_{04}: There will be no significant relationship between the kinaesthetic learning style and academic procrastination among Secondary Level Learners.

Table 4: Correlation between Dimensions of Learning Styles and Academic Procrastination

Variables	N	r-value	p-value	Level of Significance	Decision
Visual & Procrastination	120	-0.38	0.02	Significant at 0.05	Rejected
Auditory & Procrastination	120	-0.25	0.04	Significant at 0.05	Rejected
Kinaesthetic & Procrastination	120	-0.45	0.01	Significant at 0.05	Rejected

Interpretation

Table 4 shows the relationship between visual, auditory, and kinaesthetic learning styles and academic procrastination among Secondary level students. The data shows that the three learning styles are inversely correlated with academic procrastination, and the different learning styles have a different level of relation strength with academic procrastination. Academic procrastination and visual learning styles have a moderate inverse correlation. This means that students who procrastinate less tend to be more visual learners in that they depend more on learning aids such as diagrams, charts, and images. Effective organization of learning aids helps in timely completion of learning tasks. However, the correlation shows that visual learning, in its visual preference, is not able enough to sufficiently reduce procrastination. Academic procrastination and auditory learning styles have a more less relative inverse correlation. This means that learners who prefer learning by means of listening, discussions and verbal instructions, are less likely to procrastinate, but the effect is less than the other learning styles. This is because, like most other learning styles, auditory learning relies more on external input such as lectures, discussions etc. The dependence on external input, is the reason why it is less effective in reducing procrastination. Kinesthetic learning is the only exception because it has the most inverse correlation with academic procrastination of the three learning styles. Students who engage in experiential, hands-on, and active learning tend experience less academic procrastination. Prolonged focus and engagement are characteristic of active learning, which can be a remedy to procrastination. The strong correlation

between active learning and procrastination shows that learning by doing can be very effective in changing procrastination behaviour. Additionally, all three correlations have a significance level of $p < 0.05$, meaning that statistically, the correlations are strong enough to be greater than the null hypothesis. Therefore, the null hypothesis (H_{02}, H_{03}, and H_{04}) can be excluded. Each of the learning styles are statistically related to procrastination in a measurable way. For learning styles, commonalities correlate with procrastination. Focused learning, however, has the most effect on procrastination, which can be attributed to increased student motivation, active participation, and greater focus on the tasks at hand. Students gain responsibility for the task at hand. The findings strongly support the need for practical, goal-oriented learning in the classroom to address learning styles and reduce procrastination.

Discussion

This paper looks to be the first to investigate the combination of learners' educational styles and their proclivity for academic procrastination. Studies have been conducted to analyse them separately and even to analyse their conjunctions in different age groups and educational levels. However, there's little to no documentation for the reasoning behind the occurrence of delay in other academic tasks through the specific lenses the styles of learning of students. The results show that most learners at the secondary schooling level who have demonstrated academic procrastination tend to be kinaesthetic learners, followed by visual and then auditory. This reveals that secondary level students appreciate and learn better through active, hands-on, and experiential approaches to learning. This is likely due to their level of development, where participation and activity in the learning experience leads to better comprehension and memorization of the material. This correlates other studies that have found that people learn better when more activity is included in their learning experience. Also, the results show that the students' academic procrastination is at a moderate level, meaning that students' tendency to delay other academic tasks is present, but not at extreme levels. Research suggests this could also be because the individual could potentially be having trouble with time management, do not feel motivated academically, or do not understand the academic content. A significant inverse relationship was found between learning styles and procrastination. It shows that the more suitable learning styles the students have, the more they are less likely to procrastinate and vice versa. When students know their learning styles and use the right ones, they are more likely to do their schoolwork. This was result supports that the right tools are given to students, they focus more and avoid less. From the results, we are able to see that all three learning styles: visual, auditory, and kinaesthetic, are inversely related to academic procrastination. This is especially true with kinaesthetic learning styles. Meaning that students who learn best with practical activities are less

likely to procrastinate with school work. This is contrary to what auditory learning style showed, which was, the weakest relationship, meaning that learning passively is not as great as it is thought to be when it comes to procrastination. All in all, this shows that teaching strategies need to be adapted and integrated with students' learning styles. When teaching styles and students' learning styles, students feel more motivated and take on more in school which decreases procrastination.

Conclusion

From the data analysis and interpretation, learning style and academic procrastination among Secondary level students is positively correlated. The study aim shows students' learning preference affects their academic behaviour, specifically, the delay in the completion of academic tasks. Findings confirm that of all learning styles, kinaesthetic is the most preferred and most effective in curbing academic procrastination. Students who participate in active and experiential learning are most likely to take ownership of their learning. On the contrary, students who adopt fewer learning strategies are more likely to procrastinate. The study also observes academic procrastination to be existing among Secondary level students at a moderate level. This observation should draw concern from educators and parents. Students should be instructed on developing learning strategies and self-regulation in a bid to reduce procrastination. The study also advocates for more learner-centered pedagogy that takes into consideration all the different styles of learning. This initiative will undoubtedly foster greater academic engagement and reduce procrastination, thereby enhancing students' academic achievement. The study findings will be of value to teachers, curriculum developers, and educational policy implementers in creating efficient educational systems that take individual student differences into account.

Educational Implications

The results provide salient educational implications. Engaging in learning activities requires teaching methods that take into account students' learning activities, thus, teachers are advised to use activity-based teaching methods and implement experiential learning to reduce students' academic procrastination and increase students' involvement. It is also important to develop students' awareness of their learning activities as well as their study techniques. Training in self-regulation and time management is required to reduce procrastination as well. Finally, to improve students' academic performance, educational planners should develop and design contents that are flexible to different students' learning styles.

References

Balkis, M., & Duru, E. (2009). Prevalence of academic procrastination behaviour among pre-service teachers, and its relationship with demographics and individual preferences. *Journal of Theory and Practice in Education, 5*(1), 18–32.

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning: A systematic and critical review*. Learning and Skills Research Centre.

Fleming, N. D. (2001). *Teaching and learning styles: VARK strategies*. Christchurch, New Zealand: N.D. Fleming.

Grasha, A. F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Alliance Publishers.

Kaur, G., & Kaur, P. (2015). Learning styles and academic achievement among Secondary level students. *International Journal of Applied Research, 1*(13), 123–126.

Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology, 33*(4), 915–931.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Kumar, S. (2019). Study habits and academic procrastination among adolescents. *Indian Journal of Educational Research, 8*(2), 45–52.

Rani, S., & Jha, M. (2018). Learning styles among Secondary level students in Bihar. *International Journal of Research in Social Sciences, 8*(5), 210–218.

Sharma, R. (2017). Academic procrastination among high school students. *Indian Journal of Psychology and Education, 7*(1), 34–39.

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65–94.

Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. *Educational and Psychological Measurement, 51*(2), 473–480.

Yadav, R., & Singh, S. (2020). Academic procrastination among Secondary level students. *Journal of Educational Studies, 12*(1), 55–62.

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning: A systematic and critical review*. Learning and Skills Research Centre.

Ferrari, J. R. (1995). Procrastination and task avoidance: Theory, research, and treatment. *Springer*.

Fleming, N. D. (2001). *Teaching and learning styles: VARK strategies*. Christchurch, New Zealand: N.D. Fleming.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin, 133*(1), 65–94.