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Pre-Service Teacher's Self-Regulated Learning, Active Procrastination and Goal Orientation-A Path Analysis

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Abstract

Increasing competition of modern day has evolved as a threat to students' academic achievement. When students postpone some actions to future, they involve in procrastination. Researchers have viewed procrastination as a common impediment of academic achievement and wellbeing of students (Steel, 2007). Procrastination can be defined as "a trait or behavioural disposition or delay in performing a task or making decisions" (Milgram et al., 1998; Haycock et al., 1998; Kachgal et al., 2001). Contrasting to this, active procrastination is "an intentional decision to procrastinate in order to cope and focus on to the task at hand and experience performance pressure". What is the student's awareness about their own learning; are they becoming master of this and are they trying for lifelong learning. These are the few questions before today's students, which are answered by self-regulated learning (Jeyavel & Kadiravan, 2013). Another important motivational variable under research in the past decade is goal orientation. It is one's goal preference in achievement setting. It can be expected that motivated students won't entertain in procrastination. This study made an attempt to find out the impact of pre-service teachers' goal orientation and self-regulated learning on their active procrastination. 145 students (72 males, 73 females) studying in two colleges of Education in Kalaburagi city, Karnataka state, India are the sample of this study. Structural Equation Modeling (SEM) was executed through AMOS software. The findings were analyzed based on the hypothesized structural model with good model fit and revealed that active procrastination and performance avoidance orientation are the negative predictor of pre-service teachers' organizing and transforming SRL strategy and their environmental structuring. Whereas, active procrastination and learning orientation have predicted positively organizing and transforming SRL strategy and environmental structuring.

Keywords: Active procrastination self-regulated learning strategy use, performance orientation, environmental structuring, organizing and transforming.

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Introduction

Advancements in science and technology made the educational system more complex day by day. In this competitive era, students are experiencing more pressure than the previous generations. Increasing competition of modern day is threatening students' academic achievement. These days, Success or failure in the academic area is very important for every student. Students have to concentrate on class work, homework, tuitions, extracurricular activities, projects, assignments, exam preparation and etc. When students focus their attention continuously on all the academic tasks, they succeed academically. When they are unable to focus on the task at hand, they tend to procrastinate.

Procrastination

Procrastination has typically been defined as “a trait or behavioural disposition to postpone or delay performing a task or making the decision (Kachgal et al. 2001)”. It can also be defined as “a voluntary yet irrational delay of an intended course of action (Steel, 2007), and also results in unsatisfactory, performance and emotional upset (Chu & Choi, 2005; Ferrari O' Callegan & New Begin, 2005)”. When University students procrastinate, it can lead to the outcome of failure in completing assignments, cramming test & social anxiety (Lee, E. 2005); involving self-handicapping activities, underachievement, fear of failure (Dewitte & Schouwenburg, 2002) and can also result in damaging mental health outcome such as depression and anxiety (Ferrari & Scher, 2000). Many researchers have explored that undergraduates' procrastination was a type of anti-motivation that had been resulted by the self-regulation failure, and is correlated with lower academic self-efficacy & self-esteem and with high level of stress and illness (Ferrari et.al. 2005; Howell, Watson, Powel & Buro, 2006; Wolter, 2007).

While examining the literatures on academic procrastination, we could find that psychologist focused more on self-regulation, self-efficacy and self-esteem and its role in procrastination. It is also revealed that lower confidence in achievement and deficit self-regulation are the important cause behind procrastination (Steel, 2007; Wolter, 2003). Ferrari (2001) also found that chronic procrastinators have a tendency to fail in managing their performance skills effectively, and liable to execute academics task poorly under pressure. Chu & Choi (2005) have concluded that students with high self-efficacy can initiate tasks and persists on tasks in the face of challenges; whereas lower self-efficacy students may tend to engage in procrastinating behaviour. Finally, researchers have insisted that procrastination is related to low self-esteem, were the learner may postpone task initiation or completion due to low academic self-worth (Ferrari, 1994; Steel, 2007). Schraw, Wadkins & Olafson (2007) have also explored to differentiate adaptive and non-adaptive procrastination and active or passive procrastination.

Active Procrastination

Lay (1987, 1988) has identified and distinguished between optimistic and pessimistic procrastinators. Anxiety and low self-efficacy were not reported in optimistic procrastinators. Klassen et al. (2008) reported that a considerable portion of adolescents, who were affected by procrastination had lower Grade Point Average and lower self-efficacy whereas others do significantly different from this group.

Chu & Choi (2005) have identified that procrastinators can be differentiated as active and passive procrastinators. Passive procrastinators are described as the conventional procrastinators, who do not procrastinate intentionally, but end up doing so and experience negative end results such as high anxiety and low performance. Alternatively, active procrastinators reported a performance urgency and attempt deliberately to procrastinate in order to focus attention on other tasks at hand at the last moment. Although active procrastinators engage in procrastination, they are likely to experience satisfactory outcome by their procrastination. He also confirmed that the personality trait of extraversion and emotional stability was positively related to active procrastination. They also have higher time management skills, better coping strategies, self-efficacy, emotional regulation, better performance and better conscientious than passive procrastinating people. In addition, they reported to use higher goal setting skills, executive skills likely, planning, controlling, and time management. They also engage in higher physical exercises in order to cope with their last-minute difficulties with less stress.

Self-Regulated Learning

Socio-Cognitive theory emphasised the role self as an agency to the goal-directed action. Self-regulation in learning context is Self-regulated learning (SRL) which has been the major topic of research in education (Winne, 2005). Pintrich (2000) defines it as “an active, constructive process by which the learner sets goals, monitor his learning and control his motivation, behaviour and cognition”. According to Wirth & Leutner (2008), “it is a learner’s competence to autonomously plan, execute, and evaluate learning processes, which involves continuous decisions on cognitive, motivational, and behavioural aspects of the cyclic process of learning”. DeWall, Baumister & Vohs (2008) stated that “it is a person’s ability to change his or her own behaviour related to learning”. As Zimmerman (1998) highlighted academic self-regulation, not as a mental ability, such as intelligence, or an academic skill, such as reading, proficiency, rather “it is a self-directed process through which learners transform their mental abilities into academic skills”. Self-regulated learning theories try to answer an important question in academics that despite having higher mental ability, better status, and facilities, why some fail to achieve academically (Zimmerman, 2001). Schunk & Zimmerman (2003) have claimed that self-regulated learning is not a stable entity but will change over a lifetime.

Zimmerman & Schunk (2001) reported the importance of self-regulated learning in the academic achievement of the learner. When students learn to regulate their cognition and motivation, that will have an effect on their learning & a higher level of achievement (Wolter, 2011). SRL combines both skill and will. Learning strategies of the learner are the skill component and motivation of the learner is the will component. Students’ academic performance can be improved by training their self-regulated learning capabilities.

Goal Orientation

Goal refers to potentially accessible, conscious cognitive representation. Whereas, Goal orientation is “one’s goal preference in achievement settings (Dweck, 1986) and a desire to develop, realize and exhibit the capability to perform a specific activity (Dweck & Leggett, 1988)”. Researchers distinguished between mastery and

performance goals. Mastery goal orientation is preference to enhance one's abilities and competences. And, it has positive effects on learners' intrinsic motivation, persistence after failure, challenge seeking, and deep processing of information (Grant & Dweck, 2003). Performance goal orientation is differentiated as performance approach orientation and performance avoidance orientation. Performance avoidance orientation is the desire to avoid failure, and usually associated with less interest, high anxiety, and messy work engagement (Elliot & Church, 1997; Wolters, 2004). When students have the required competence to outperform others they engage in performance approach goals. Some researchers have concluded that it is adaptive; others considered this as potentially nonadaptive. Further, when students are encouraged to demonstrate competence and abilities for success in exam, they may tend to focus on the outcome and the easier ways to reach a high score than on a deep and complete understanding of the course content.

Review of Literature

Procrastination is one of the important construct which have been researched for the past decades. Many researchers have attempted to find the relationship of it with self-efficacy and revealed the negative relationship (Choi & Moran, 2009; Steel, 2007 & Wolters, 2003). As Klassen et al., argues, academic self-efficacy is related to procrastination, more prediction would be contributed by self-efficacy for SRL (Klassen et. al., 2008, 2010; Tan et al., 2008).

It can be assumed that self-regulatory failure leads to procrastination. Whereas, Ferrari has reported that procrastination can increase as one become more self-regulated (Ferrari, 1991). Moran's (2009) findings have confirmed this claim as active procrastinators display better time management, more adaptive coping strategies, better regulation of emotion, and higher academic performance than passive procrastinators.

Research on active procrastination provides an opportunity to understand the nature of procrastination. Further investigation is needed to exam the difference in active procrastinator's self-regulated learning in different context to have more clarity in the construct of active procrastination, and its adaptive functioning in the academic context.

Moreover, there are significant researches on students' self-regulation at elementary school, high school, undergraduate & postgraduate level, and little focus is on pre-service or in-service teachers' use of self-regulatory strategies for their own learning. For encouraging students to be a self-regulated learner, teacher needs to be a self-regulated learner. Gordon, Dembo & Hocevar (2007) have pointed out that pre-service and in-service teachers often do not use SRL strategies effectively. If teachers are equipped with self-regulation in turn they could help students to be self-regulated learning. In this context, it becomes necessary to explore the pre-service teachers' self-regulated learning and its predictors like goal orientation and active procrastination.

Objectives

The main objectives of this study are listed below:

1. Examining the relationship between self-regulated learning, goal orientation and active procrastination.
2. Analyzing the influence of self-regulated learning and goal orientation on

pre-service teachers' active procrastination.

Research Questions or Hypotheses

The following research questions have been framed in order to reach the objectives mentioned earlier.

1. Whether lacking self-regulatory skills lead to active procrastination?
2. Does performance goal orientation lead to active procrastination?

Methodology

This study adapted the survey method. 154 College students were selected from four different B.Ed. colleges of Gulbarga town in the Karnataka state of India through stratified random sampling with the mean age of 23.6 and SD=3.8. With the personal data sheet, they were administered the following standardized tests.

1. **Active Procrastination Scale by Choi & Moran (2009)** - It is a 16-item scale that assesses four dimensions of active procrastination: outcome satisfaction (4 items; $\alpha=0.83$), preference for pressure (4 items; $\alpha=0.82$), intentional decision (4 items; $\alpha=0.70$), and ability to meet deadlines (4 items; $\alpha=0.70$). All constructs were measured using multi-item indexes with a response format of a 7-point likert scale, with anchors ranging from not at all true to very true. Higher scores on the scale indicate higher active procrastination. The instrument has been validated through exploratory factor analysis, confirmatory factor analysis, measurement of internal consistency, a nomological network, and measurement of incremental validity (Choi & Moran, 2009). The instrument has exhibited an acceptable reliability coefficient of 0.80.

2. **Self-Regulated Learning Measure by Dr Kadhiravan (1999)** - 40 items tool with statements which reflect student's study practices, and expressed to give their option from very often, often, sometimes, rarely and never. The split-half reliability of the tool is 0.806 and the test-retest reliability is 0.794. The validity of the test is found to be 0.897. The face validity, content validity and predictive validity are also established for this tool.

3. **Goal Orientation Measure by Zweig and Webster (2004)**. This tool consists of 21 items, with seven responses. It measures goal orientation in three dimensions as performance-approach, performance avoidance and learning orientation. The test-retest reliability of this scale is 0.73. Convergent validity of this scale is 0.87.

After scoring, only 145 data were taken for analysis because of the incompleteness of the data. 't'-test, product moment correlation was used for analyzing the data.

Results & Discussion

Table 1 shows the correlational analysis of self-regulated learning, goal orientation and active procrastination. It is observed that, organizing & transforming strategy is inversely related to active procrastination ($r= - 0.204$; $p<0.007$); environmental structuring strategy is positively related with active procrastination ($r= 0.22$; $p<0.004$). Organizing and transforming is "student-initiated overt or covert rearrangement of instructional materials to improve learning (Zimmerman & Martinez Pons, 1998). This may require enough time for our preparation. Active procrastinating students could not spare enough time for involving in organizing and transforming. Since they need to

complete the academic tasks in limited time, they are in need to manage their environment conducive for their task in hand like switching off their mobiles, display of 'do not disturb' board and involving in group work.

Table 1. Summary of Inter-correlation: self-regulated learning, active procrastination and goal orientation

Self-regulated Learning Strategies	Active Procrastination	Performance Approach Orientation	Performance Avoidance Orientation	Learning Orientation
Self-evaluation	0.031	0.234**	0.072	0.139*
Organizing & transforming	-0.204**	0.067	-0.051	0.120
Goal setting & Planning	-0.081	0.311**	0.105	0.272**
Seeking Information	-0.037	0.281**	0.188*	0.244**
Keeping Records	-0.052	0.323**	-0.081	0.229**
Environmental Structuring	0.220**	0.181*	0.021	0.221**
Self-consequences	-0.030	0.297**	0.099	0.275**
Rehearsing & memorizing	-0.067	0.292**	0.149*	0.277**
Seeking social assistance	0.057	0.298**	0.238**	0.239**
Review of records	0.123	0.287**	.007	0.191*
Self-regulated learning Total	-0.001	0.406**	0.111	0.345**

**-Significant at 0.01 level

Performance approach goal orientation has a positive relationship with all the dimensions of self-regulated learning except organizing and transforming. When an individual's perceived competence is high, he engages in performance approach orientation. He could able to self-regulate himself for the academic task. Whereas, performance avoidance goal orientation has significant positive relation with seeking information strategy ($r=0.188$; $p<0.012$); rehearsing & memorizing ($r=0.149$; $p<0.037$); and seeking social assistance ($r=0.238$; $p<0.002$).

These results indicate us the importance of these strategies in avoiding failure in the tasks which learner could not have competence. Like performance approach orientation, learning orientation also has a positive relationship with all the dimensions of SRL except organizing and transforming.

Further to identify the role of self-regulated learning and goal orientation on active procrastination, multiple regression was attempted and presented in Table 2.

Table2. Influence of goal orientation and self regulated learning on active procrastination: self-regulated learning

Independent variable	Dependent variable	β	't'-value	Model summary
Environmental Structuring	Active Procrastination	0.887	3.540	R ² = 0.243 F=6.268** P<0.01
Organizing and Transforming		-0.950	3.596	
Review of Records		0.462	2.209	
Performance Avoidance		0.269	2.524	
Orientation				
Performance Approach Orientation		-0.362	3.229	

**-Significant at 0.01 level

It is found that Environmental structuring, Organizing and transforming & Review of record SRL strategies have a significant influence on active procrastination ($\beta=0.887$; -0.95 ; 0.462) In the same way, performance approach orientation and performance avoidance orientation is also found to have a significant influence on active procrastination ($\beta=-0.362$; 0.269). Ferrari (1991) argued that self-regulatory failure is leading to procrastination of students. But, pre-service teachers' self-regulatory skills ie. environmental structuring and review of record have positively influenced their active procrastination whereas, organizing and transforming has a significant inverse influence on their active procrastination.

In order to confirm the above findings, Analysis of Moment Structure (AMOS) software was used to perform structural equation modelling (SEM). Skewness and kurtosis were examined for the confirmation of Normality (Field, 2009). For the Default model, Chi-Square was significant and all indexes were very low which indicated that this model does not fit in the data. The model has been trimmed further with reference to the modification indices. The overall trimmed model (see Figure 1) provided a good model fit with fit indices in an acceptable range: $\chi^2 = 5.54$; $df= 3$; $p=0.136$; GFI = .985; CFI = .956; NFI = .918; AGFI=0.925 and RMSEA = .077.

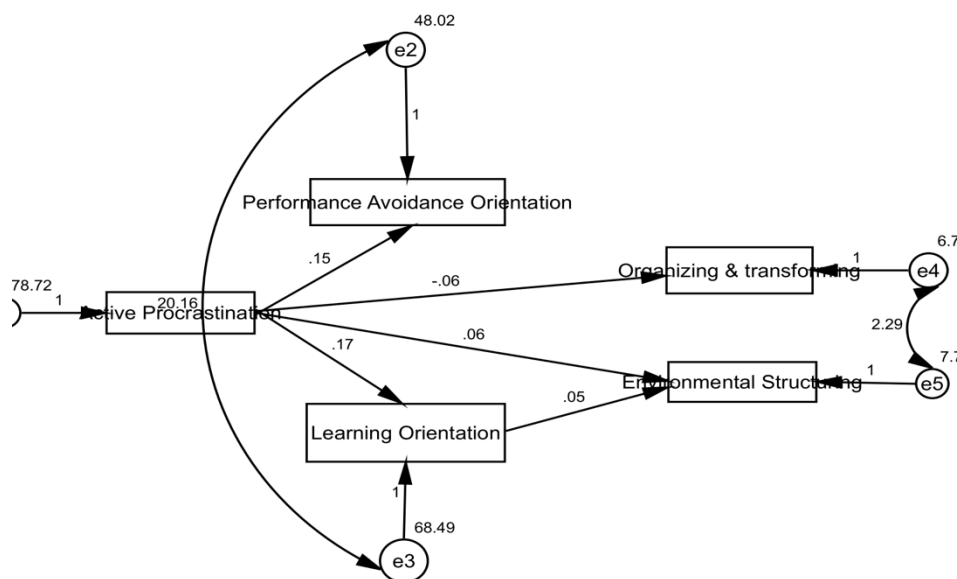


Fig:1 The overall structural model of the study with unstandardised coefficients

For the trimmed model, chi-square test was not significant ($\chi^2 = 5.54$; $df = 3$; $p = 0.136$) resulted in acceptably high goodness fit indexes, indicating that the trimmed model fit the observed data. The GFI and NFI yielded impressive indexes of 0.985 & 0.918 respectively and RMSEA reported the value of 0.077 indicating the relatively good index of fitness.

Table 3 indicates that pre-service teachers active procrastination inversely influences organizing and transforming SRL strategy ($B = -0.06$; $CR = -2.502$; $p = 0.012$). Active procrastination also directly influences environmental structuring SRL strategy, Performance avoidance orientation and Learning orientation ($B = 0.06$; $CR = 2.41$; $p = 0.016$; and $B = -0.15$; $CR = 2.239$; $p = 0.077$). Fig.2 depicts the overall structural model of the study with standardised coefficients.

Table 3. Unstandardized and Standardized Regression Weights in the Hypothesized Paths Model Predicting Self-regulated learning

Causal Path	B	SE	Beta	CR	p
Environmental structuring <----- Learning orientation	0.05	0.027	0.14	1.767	0.026
Organizing & transforming<----- Active procrastination	-0.06	0.024	-0.2	-2.502	0.012
Environmental structuring <----- Active procrastination	0.06	0.027	0.2	2.410	0.016
Learning Orientation<----- Active procrastination	0.17	0.078	0.18	2.219	0.026
Performance avoidance orientation<----- Active procrastination	0.15	0.065	0.18	2.239	0.077

B = Unstandardized Regression Weight Estimate; C.R = Critical Ratio; P = Significant Alpha; S.E = Standard Error; Beta = Standardized Regression Weight.

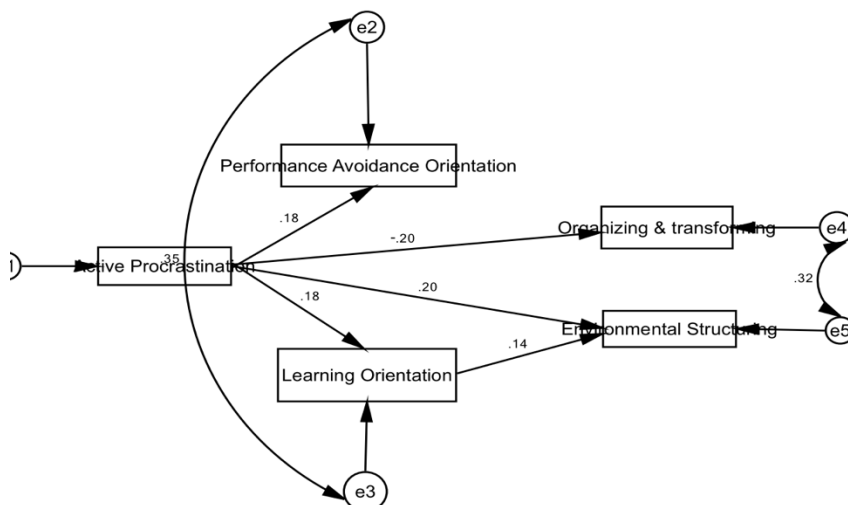


Fig:2 The overall structural model of the study with standardised coefficients

Taura, Abdullah, Roslan, Omar (2014) have concluded on the basis of median analysis that self-regulation has a mediating role between intrinsic goal orientation, extrinsic goal orientation and active procrastination. This confirms the hypothesis that active procrastination occurs as a result of self-regulatory failure. Whereas the present study has resulted that pre-service teachers' active procrastination has influenced Self-regulated learning strategies especially organizing & transforming and environmental structuring SRL strategies. This result is contradicting to the present theoretical understanding of active procrastination which requires further studies to confirm the results.

Conclusions

On the basis of current study results, it is concluded that pre-service teachers' active procrastination has a significant inverse relationship with organizing & transforming SRL strategy and has a significant positive relationship with environmental structuring SRL strategy. Active procrastination has a significant inverse influence on organizing and transforming and positive influence on environmental structuring. It also has a significant positive influence on learning orientation as well as performance avoidance orientation. Further studies could confirm the role of active procrastination in predicting self-regulated learning.

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