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Influence of Self-Regulated Learning Components and Barriers on the Performance of M.Ed. Students in a Blended Workshop

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Abstract:

This study is an attempt to identify the key components of Self-regulated Learning (SRL) and associated barriers that influence participants' performance in a 5-day blended-mode Workshop designed to support the development of a research proposal. The participants were 33 M.Ed. students volunteered from four Teacher Education Colleges affiliated to the University of Calicut, Kerala.

A pre-experimental before and after design was used to measure the participants' performance and to identify the SRL Components and Barriers that influenced it in the workshop respectively. The need to manage a quality ecosystem in the evolving educational practices in this era of technology is supported by the results of the study which identified Execution as a major SRL component contributing to the performance of the participants. It also reveals the influence of time spent on social media and laziness as SRL barriers that adversely affect the participants' performance.

Keywords: *Self-Regulated Learning (SRL), SRL Barriers, Adult learning, Teacher Education, Higher Education*

1. Introduction:

Self-regulated learning (SRL), defined by Zimmerman, is the learners' belief about their capacity to engage in appropriate actions, thoughts, feelings, and behaviors to pursue valuable academic goals, while self-monitoring and self-reflecting on their progress toward goal-completion. SRL has its roots in Bandura's Social Cognitive Learning Theory (1986)[1], which emphasizes on the reciprocal interaction of the learner, environment, and behaviour. On this basis the relevance of conscious effort put in by the learners through SRL becomes more specific while organizing and implementing actions necessary to attain the designated performance levels. On this theoretical basis the study sets on identifying the components and barriers of SRL that influence the performance of the M.Ed. students in an academic workshop.

[1]Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

As Wood and Thompson (1980, 1993)[2] identify, teacher development is a sub-set of adult development and is underpinned by adult learning theories. Several researches (Hopkins, 1986[3]; Puchner & Taylor, 2006[4]; Karagiorgi, 2008[5]; Meirink, 2009[6]) observed that resourceful higher education programmes take into account principles of adult learning, such as voluntary participation, mutual respect, collaborative spirit, action and reflection, critical reflection, and self-direction. The post-graduate students attending the short-term workshop being independent adult learners, their possession of specific learning characteristics and barriers thereof are examined in the present study.

Understandably, self-learning and development is even more crucial for teacher educators and teachers. Hence, the adult learning principles and its self-regulating aspect needs to be more pronounced in the education of prospective teachers and teacher educators. However, M.Ed. programmes in many of the Indian universities that aspires to prepare future teacher educators continue to be dominated by teacher centered practices that too in ways that fits more to children than adults. The efforts to make teacher education programmes and preservice development of teacher educators more in tune with adult and self-directed learning is reflected in learning from workshops, discussions, seminars, case study analyses, field–based learning, and the like. As is the case with any other formal learning situation, many a learner, content, instructional and contextual factors influence effectiveness of self-directed learning of the prospective teachers and teacher educators from these learning contexts that fits more to andragogic principles.

However, such factors that impact the efficacy of andragogic teaching-learning contexts remains largely unexplored, especially in Indian context. Some of the most prominent characteristics of adult learners as identified by Brookfield (1986)[7] are: adults feel the need to learn and have input into what, why, and how they will learn. Voluntary participation is always preferable to

[2] Wood, F. & Thompson, S. (1980). Guidelines for better staff development. *Educational Leadership*, 37 (5): 374 -378.
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[3] Hopkins, D. (1986). *In-service training and educational development: An international survey.* Croom-Helm.
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[7] Brookfield, S. (1986). *Understanding and facilitating adult learning.* Jossey-Bass.

mandatory participation, as, when adults engage in learning as a result of their own volition, they are more committed to the whole process. The volitional aspects of Self-regulated learning are those mechanisms that control concentration and aid progress in the face of environmental and personal obstacles to academic learning (Corno, 1986)[8]. This commitment is focused in the present study as it is conducted among the participants who enrolled voluntarily and participated in a short-term workshop. The study also determines the effectiveness of the workshop in relation to certain components and barriers of SRL among the participants.

The present study was conducted during a short-term workshop for M.Ed. students on developing research proposal, organized by the MHRD Teaching-Learning Centre, University of Calicut. It was a 5-Day Workshop conducted in blended mode with an aim to facilitate the participants with hands-on experience and expert interactions regarding the various stages involved in developing a Research Proposal. This study determines the effectiveness of the workshop in relation to certain components and barriers of SRL among the participants. The SRL components in the present study are adopted from Zimmerman's Cyclical Model of SRL (2009)[9] viz. Forethought process, planning and Execution, Metacognition, and Feedback and assessment. The four selected SRL barriers specified in the present study are Time spent on Social-Media, Family Responsibilities, Time taken to travel to college, and Laziness. Along with testing the effectiveness of the workshop in training the Master of Education (M.Ed.) students to develop a research proposal, the study aims to identify the contribution of specific SRL components and the influence of SRL barriers on the performance of the participants in the workshop.

2. Literature Review: Bridges and Barriers to Self-Regulated Learning:

Self-regulated Learning (SRL) is essential for individuals, particularly with regard to employability and lifelong learning (Zimmerman & Schunk, 2001)[10]. According to this viewpoint, SRL can be defined as the degree to which students are proactive and responsible participants of their own learning process (Zimmerman, 2008)[11]. There are phenomenological, cognitive constructivist, information processing, and volitional perspectives of self-regulated learning (Kitsantas, 2013)[12]. This study focuses on the Social Cognitive and volitional perspective of SRL. Based on this

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[12] Kitsantas, A. (2013). Fostering college students' self-regulated learning with learning technologies. *Hellenic Journal of Psychology,* 10(3), 235-252.

perspective, Zimmerman and Kitsantas (2005)[13], observed that self-regulated learners engage in a number of key self-regulatory processes such as setting clear, specific, and challenging goals, by self-monitoring and by evaluating their progress throughout the practice sessions.

This interaction of the various processes of SRL is described through an adaptation of Zimmerman's Cyclical Model of SRL (2000)[14], which includes the forethought, performance, and self-reflection phases. The forethought phase of SRL works as a preparation stage for the learners to identify specific processes and outcome goals and plan accordingly the steps to accomplish them and the performance and self-reflection phases are task-specific and learner oriented based on the outcome goals defined in the earlier phase.

In this study the forethought process is a combination of the motivation, preparation, and the conscious effort of the participants at the initial stage of attending the workshop. In the performance phase the participants' metacognitive awareness and strategies were measured by focusing on their task-specific involvement to accomplish their outcome goals. In the final phase, the self-reflection activities and preferences of the participants in the process of execution and feedback is examined. These three phases of the self-regulated learning model are sustained cyclically by a self-regulatory feedback loop where information from each phase informs the learners on how to adjust their learning approach to more effectively accomplish academic goals (Kitsantas, 2013)[15].

Based on the Social Cognitive perspective of Self-regulated learning, the barriers selected for SRL in the present study were a representation of the age group and personal commitments and daily routine of the participants who enrolled in the short-term workshop. Thus, the selected SRL barriers for the present study were (i) Time spent on social media, (ii) Family responsibilities, (iii) Time taken to travel to college, and (iv) Laziness. The role of social media among learners in Higher Education in the Indian context has still been stuck at its primary purpose of sharing and updating their personal life and events rather than making it a platform for shifting from the traditional learning system. The accessibility to a distraction like social media throughout the hours of a day have become a challenge for the learners to overcome while participating in academic activities viz., workshop, seminar, group discussions, case study etc.

[13] Zimmerman, B. J., & Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychology*, 30(4), 397–417. https://doi.org/10.1016/j.cedpsych.2005.05.003

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While researching on the characteristics of adult learners Kapur (2015)[16] pointed out that the motivation to continue to learn for adults comes intrinsically unlike children and hence learning should be goal and relevancy-oriented, practical, using purposeful activities. Also stresses on the baggage that adult learners usually carry in the form of commitments and responsibilities in their professional, personal, and social life. Learners choosing to pursue the Master of Education (M.Ed.) degree come from an age group who are already responsible adults in their social and personal life. This highlights the need to analyze the extent to which SRL barrier "family responsibilities" has affected the performance of the participants in the short-term workshop.

The University of Calicut, as of M.Ed. Programme 2024 Admission Notification, has a sanctioned intake of 400 students for each academic year in the M.Ed. Programme among 8 teacher education institutes located in Kozhikode, Malappuram, Palakkad, and Thrissur districts of Kerala. This low accessibility to colleges providing M.Ed. programme creates the issues related to the distance to be covered while commuting to the college for the day scholars as it consumes a major part of their daily time that has to be scheduled purely on the basis of the time taken to reach the college and back home. Thus, the time taken to travel to college stands as a serious external barrier while planning and preparing for the academic activities that require the full-time participation of the learners. Laziness is another selected SRL barrier for the present study and is considered as a personal inhibiting factor that limits the development and consistent practice of Self-regulated Learning among the participants of the short-term workshop. The adult learners would easily get exhausted when not being able to complete their academic tasks as expected which can result in lack of motivation leading to procrastination and laziness.

3. Rationale of the Study:

The study aims to identify the adult learning characteristics and specific SRL components that contribute to the performance and select SRL barriers that debilitate the performance of the participants in a volunteered workshop.

4. Research Questions:

A) Which SRL components among Forethought process, Execution, Metacognitive awareness and, Feedback and Assessment contribute to the successful participation of post-graduate teacher education students in a volunteered workshop?

B) Which factors among Time spent on social media, Family responsibilities, Time taken to travel to college and, Laziness barrier the self-regulated learning performance of post-graduate teacher education students in a volunteered workshop?

[16] Kapur, S. (2015). Understanding the characteristics of an adult learner. *Jamia Journal of Education,* 2(1), 111 121.

5. Objectives of the study:

(1) To compare the mean scores of SRL Components viz.

i) Forethought Process
ii) Execution
iii) Metacognitive Awareness
iv) Feedback and Assessment,

(2) Of the achievers and non-achievers identified with regard to their performance in the short-term workshop.

i) To compare the mean scores of selected SRL Barriers viz.
ii) Time spent on social media
iii) Family responsibilities
iv) Time taken to travel to college
v) Laziness

Of the achievers and non-achievers identified with regard to their performance in the short-term workshop.

6. Hypotheses:

(1) Ho_1: Achievers in a short-term workshop are significantly higher than their non-achieving counterparts in their SRL Components viz. –

i) Forethought Process
ii) Execution
iii) Metacognitive Awareness
iv) Feedback and Assessment

(2) Ho_2: Non-Achievers in a short-term workshop are significantly higher than their Achieving counterparts on select SRL Barriers viz.-

i) Time spent on social media
ii) Family responsibilities
iii) Time taken to travel to college
iv) Laziness.

7. Methodology:

7.1 Research Design:

A single group pre-experimental pretest-posttest design is used to measure the performance of the participants in the short-term workshop on Preparation of a Research Proposal. A single

pretest scores were taken from the group of participants ($\boldsymbol{O_1}$), followed by the workshop (X), and a single post-test score on the same measure ($\boldsymbol{O_2}$):

$\boldsymbol{O_1}$------X------$\boldsymbol{O_2}$

7.2 Participants:

The Short-term Workshop on the Preparation of a Research Proposal was organized by the MHRD Teaching-Learning Centre, University of Calicut during the summer break for the Master of Education (M.Ed.) students from various Teacher Education Colleges of the University of Calicut. Though 33 students registered for the workshop, only 27 of them attended throughout the workshop. The topic dealt in the workshop being a core part of the M.Ed. Programme, their participation was self-volunteered.

7.3 Instrument:

The research data were collected by administering a Self-regulated Learning (SRL) Scale modeled based on Zimmerman's Cyclical Model of SRL. It was a sixteen-item self-reporting scale composed of two parts, the first dealing with the components of SRL viz. forethought process (eg. I am attending this workshop to attain practical experience in developing a research proposal; as my friends are also attending; my teachers suggested to; I want to explore a new institutional set up), Metacognitive awareness (eg. I have revised/ recollected the activities of Day-1 of the workshop; the activities of Day-1 have helped me to be much more prepared for today's tasks.), Execution (eg. I have started following a study plan since my- Lower primary, upper primary, high school, higher secondary, graduate, post-graduate, B.Ed., or M.Ed. class) and Feedback and Assessment (eg. I prefer feedback and assessment at the end of the workshop/ at the end of each session); and the second part dealing with SRL barriers viz. Time spent on Social-Media, Family Responsibilities, Time taken to travel from and to College, and Laziness. The pretest and posttest measures on achievement of research proposal tasks were collected by administering a test on the knowledge of the different processes and aspects of a research proposal. The test consisted of 20 items with four options each to choose from.

7.4 Procedure:

The Short-term Workshop on the Preparation of Research Proposal, in blended mode, required the involvement of the participants for a duration of five days, of which the participants had face-to-face interactions and hands-on activities on three alternate days. On the other two days, they were given hints and guidelines to complete specific tasks based on reviewing related literature and writing the various sessions of the research proposal.

7.5 Preparation:

The participants registered for the workshop were instructed to choose a few areas of educational research that they were interested in, as a prerequisite for attending the workshop.

7.6 Pre-test:

The test based on the process and steps involved in the preparation of the research proposal was administered on the first day of the workshop.

7.7 *Measurement of SRL Components and Barriers:*

The items of the SRL scale were administered in parts on all the three days of the workshop by dividing them into different sessions making it a part of their workshop activities. The items of this particular scale were specially designed in relation with the workshop activities which makes it relatable for the participants as the workshop progresses from one day to another.

7.8 Post-test:

The same test as the pre-test was applied again after the closing session of the workshop activities.

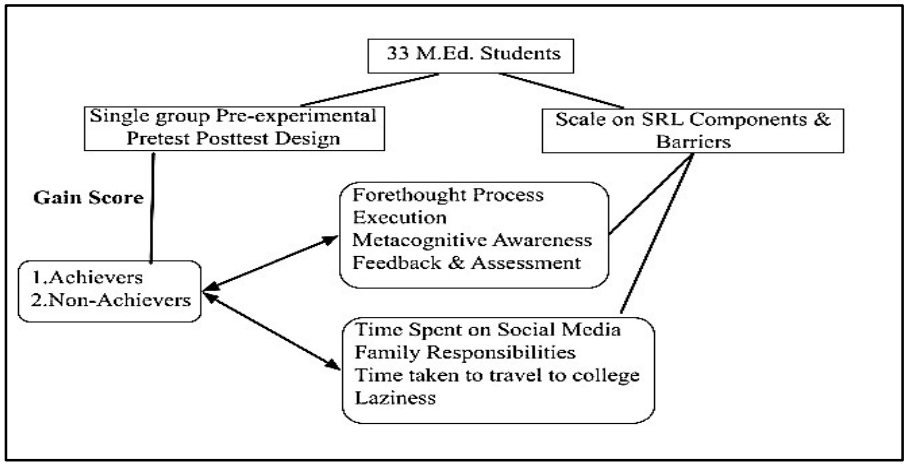

Figure 1. Representation of the Model of the Study.

8. Data Analysis:

The study sample was categorized as achievers and non-achievers based on their performance gain score in the workshop. The data were analyzed using an independent sample t-test to explore the differences between the achievers and non-achievers in the SRL Components viz. forethought process, execution, metacognitive awareness, and feedback and assessment; and in the selected SRL Barriers viz. time spent on social media, family responsibilities, time taken to travel to college, and laziness.

9. Results and Findings:

The comparison of SRL components and selected SRL Barriers of Achievers and Non-achievers among post-graduate students in a short-term workshop is presented in Table 1 and Table 2 respectively.

Table 1. Comparison of Mean Scores of the SRL components Forethought Process, Execution. Metacognitive awareness, Feedback and Assessment among Achievers and Non-achievers classified based on their performance in the short-term workshop

Sl. No	Components	Sample	N	Mean	SD	t value	p value
1	Forethought process	Achiever	16	24.06	9.65	.758	.456
		Non-achievers	11	21.00	11.24		
2	Execution	Achiever	16	10.88	1.15	2.444	**.022***
		Non-achievers	11	9.73	1.27		
3	Meta-Cognitive awareness	Achiever	16	26.00	7.00	.533	.599
		Non-achievers	11	27.36	5.75		
4	Feedback and Assessment.	Achiever	16	1.75	0.45	1.091	.286
		Non-achievers	11	1.55	0.52		

**p<.025*

There exists no significant difference between Achievers and Non-achievers in their mean scores of the SRL Components viz. Forethought Process, Metacognitive awareness, and Feedback and assessment at significant level of 0.025, whereas there exist significant difference in the SRL component Execution among achievers (M=10.88) and non-achievers (M=9.73) (t=2.44, p<.025).

Table 2. Comparison of Mean Scores of the selected SRL Barriers among Achievers and Non-achievers classified based on their performance in the short-term workshop

Sl. No.	Barriers	Sample	N	Mean	SD	t value	p-value
1.	Time Spent on Social-Media	Achiever Non-achievers	16 11	2.13 2.82	0.96 1.08	1.756	**.045***
2	Family Responsibilities.	Achiever	16	2.81	0.75	.808	.213
		Non-achievers	11	3.09	1.04		
3	Time taken to travel to college	Achiever	16	2.88	1.03	.150	.441
		Non-achievers	11	2.82	0.87		
4	Laziness	Achiever	16	1.94	0.68	1.786	**.043***
		Non-achievers	11	2.45	0.82		

**p<.05*

There exists no significant difference between Achievers and Non-achievers in their mean scores of selected SRL Barriers viz. Family responsibilities and Time taken to travel to college at significant level of 0.05, whereas there exist significant difference in selected SRL barrier Time

spent on Social Media and Laziness among non-achievers (M=2.82; M=2.45) than achievers and represents a medium effect size (M=2.13; M=1.94;) (t=1.756, p<.05) and (t=1.786, p<.05) respectively.

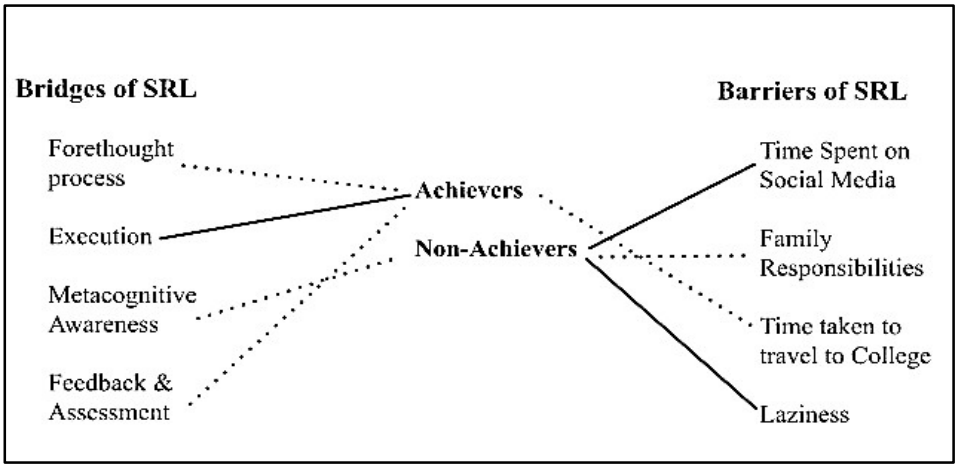

Figure- 2: Representation of the findings of the Study

10. Discussion and Conclusion:

From the findings of the current study a number of guidelines for planning and designing a short-term workshop can be traced that could cater to the needs and expectations of the participants from the Higher Education scenario. It can also be applicable in the development of self-regulated learners from an early stage of schooling. The influence of the SRL component, Execution on the performance of the participants in the workshop highlights the importance of consciously following the planned schedule of action, and the need to expect specific outcomes while committing to do a task. This conscious practice, if introduced at an educational level as early as lower primary, can influence the performance of the learners at a later stage even in short-term tasks.

The volitional aspect becomes an explicit part of Self-regulated learning as it can be viewed as the ability to prioritize learning in the face of obstacles. Planning and implementing the teaching-learning process where the learners can choose to participate based on their needs and interests can be effective in yielding better results than making the participation mandatory. This can develop learner autonomy in all stages of education specifically in the case of prospective teachers and teacher educators as the effectiveness of the volition aspect in the learning process is to be realized in order to implement the same in their future classrooms.

Analysis of the expectations of the participants and fulfillment thereof through the workshop activities revealed that the participants who came with high expectations were content with the workshop while those who came with minimal expectations were not equally satisfied. Thus, the short-term workshops should be designed in such a way that it caters to the highly goal-oriented participants as well as those with minimum goal-orientedness.

Furthermore, the workshop being conducted in blended mode, one of the major barriers to the participants' self-regulated learning practice is the social networking sites. Measures can be taken to consciously avoid the usage of social media by switching off the notifications option on the concerned gadget during the workshop activities. A practice of consciously sidelining the usage of social media while entering into an academic scenario can be inculcated among young learners which would help them to build a lifelong habit of self-regulating their tendency to navigate through the social networking sites and prioritize the academic tasks at hand. The instructors can plan and design the activities via social networking sites that are specifically geared to the workshop purpose. The time spent on social media can be used in favor of their performance by encouraging the participants to interact with peers and experts, and provide opportunities for them to become members of a community of practice that has lifelong learning implications. The participants' forethought process during workshops can be strengthened by providing pre-workshop activities focusing on their motivation level and also helping them to make conscious effort in being well equipped for the tasks ahead in the workshop.

The participants' preferences on feedback and assessment are the important characteristics of adult learners. The need to develop their performance is intrinsic and would be effective if it's immediately catered with the feedback and assessment activities inducted at regular intervals of the workshop or any process of interactive learning viz. workshops, discussions, seminars, case study analyses, field –based learning and so on. This can strengthen the prospective teacher educators' competence, and by extension higher education learners', to design the teaching-learning activities for their future student-teachers by giving equal importance to the feedback and assessment process as well.

The present study has its limitations in the sample size and duration involved. A further study by including a qualitative phase of data collection after identifying the achievers and non-achievers with high SRL and low SRL measures respectively can be helpful to understand the specific strategies that contribute to their performance, and the barriers to their self-regulated learning process can be specifically identified.

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