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SELF-DIRECTED PLANNING SKILLS AND LEARNING OUTCOMES OF ADOLESCENTS IN SECONDARY SCHOOLS IN THE SOUTHWEST REGION OF CAMEROON

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Abstract: This study investigated "the relationship between self-directed planning skills as a correlate of self-regulated learning skills and learning outcomes of adolescents in secondary schools in the Southwest Region of Cameroon. By failing to employ self-directed planning skills and metacognitive strategies in learning, learners may become more passive than active participants in a community of learners who should be engaged in meaning making in the learning process. The main objective of this study was to investigate the relationship between self-directed planning skills as a correlate of self-regulated learning skills and learning outcomes of adolescents in the south West Region of Cameroon. Two research designs were adopted for this study. The descriptive survey design with a structured questionnaire as the main research instrument and a quasi-experimental research design were used for this study. To answer the questions raised, copies of the questionnaire were administered to a sample of 451 participants; and data from them were analyzed using the triangulation approach and findings established. The data derived were subjected to descriptive and inferential statistical analysis using the Statistical Package for the Social Sciences (SPSS) Version 20.0. Based on the analyses carried out, findings showed that; there exist a significant relationship between self-directed planning skills and learning outcomes among adolescents ($r= 0.120$, $n = 451$, $p< 0.05$). Though the relationship between self-directed planning skills as a correlate of self-regulated learning skills and learning outcome is weak, the correlation coefficient is positive for all the different aspects of learning and overall, it is statistically significant ($r = 0.120$; $p=0.010$) at the 95% confident level. This significant value clearly shows that there is a significant relationship between self-directed planning skills as a correlate of self-regulated learning skills and learning outcomes of students. It was therefore recommended that teachers and educators should strive as much as possible to help learners to develop their self-regulated learning skills so as to improve upon adolescents' learning outcomes. Teachers should guide students on how to plan their studies especially when it comes to classroom discussions, transfer of learning as well as trying new things. Teachers should be flexible during lesson delivery and make sure they teach both metacognitive strategies, content and self-regulated learning skills to students in order to empower them to be autonomous life-long learners. Base on this, teachers should also guide students on how to plan their studies in terms of time, space and leaning strategies.

Key words: Self-Regulated Learning Skills, self-directed planning skills, Learning Outcomes and Adolescents.

I. Introduction

Students who have the opportunity to exercise vocal, agency and leadership in designing, developing and assessing their own learning have a greater chance of becoming resilient and independent learners. Self-regulated learning is a cyclical process, wherein the student plans for a task, monitors their performance, and then reflects on the outcome. The cycle then repeats as the student uses the reflection to adjust and prepare for the next task. The process is not a one-size-fits-all; but rather tailored for individual students and for specific learning tasks (Zimmerman, 2002). Metacognitive activities can include planning how to approach learning tasks, identifying appropriate strategies to complete tasks, evaluating progress, and monitoring understanding. Planning, which involves setting goals and laying out cognitive strategies is the first step of the cycle that may be over looked by many students as they

dive headlong into a task. Encouraging students to establish a plan before they start working on a task will help them strategize right from the start. Although students may see this as taking a step backward, it would ultimately enable students to negotiate assessment methods and criteria matched to their learning goals, assist students to take control and ownership of their learning, be more efficient with their time and effort. In this light, this study focused specifically on finding out the relationship between self-directed planning skills as a correlate of self-regulated learning and learning outcomes of adolescents in secondary schools in the South West region of Cameroon".

II. Background to the Study

The conept of Self-Regulated Learning Skills (SRLS) in teaching and learning became intense in the 1980s with focus on the learners taking ownership and control of their own learning. Cleary and Zimmerman (2004) continued to advance this research when they found students must be taught learning strategies in a cyclical manner in order to develop into successful self-regulated learners.

In the past, learning mostly presuppose memorizing and reproducing information provided by others (teachers), whereas contemporary teaching considered it far more important to acquire knowledge and skills by oneself. There was indeed a paradigm shift from teacher centred classrooms to learner centred classrooms with emphasis on how the learner processes information. It is important thus to examine how students learn and how they should learn. Presently, psychology of education highlights on intrinsic motivation and autonomous learning in order to achieve the kind of outcome for present day classroom.

With a critical observation into childhood experiences, negative or abnormal behaviour start long before adolescence. Most at times it starts with early childhood as a result of observed or modelled behaviour from parents. Zimmerman (1988) posits that self-regulation skills measure adolescents' ability to monitor their activities, assess their performance, and maintain resiliency. Self-regulated learning skills draw on social cognitive functioning, and therefore adolescence is a particular salient developmental period for the creation of self-regulation. Self-control is one factor of self-regulation and as adolescence foster to maturity, it gives them greater control and ownership over their emotions and helps them act more appropriately. Adolescents rely on both internal and external resources for their future academic success.

The majority of adolescents today expect to attend secondary school; ideally, adolescent attend secondary schools in larger numbers than in the past (Schneider & Stevenson, 1999). Due to the highly ambitious nature of this age group nowadays, completion is more intense than ever before, and adolescents must develop greater self-regulatory strategies to achieve their academic goals. Because learning is an active process, it requires effort; and effort regulation is a strong predictor of academic success (Doljinac, 1994). However, just increasing the amount of study time does not necessarily lead to better academic achievement.

This suggests that students' academic success depends not only on the time spent studying but on effective time management and it is not simply a reflection of students' desire to finish a task, but a self-management strategy that consists of bringing together many other resource management skills and strategies such as environment, proper planning, monitoring and evaluation as well as time management (Pintrich 2000, Chui 1998).

Research indicates that planning and goal setting are complementary processes, as planning can help learners establish well thought out goals and strategies to be successful (Schunk, 2006). Planning occurs in three stages: setting a goal for a learning task, establishing strategies for achieving the goal, and determining how much time and resources will be needed to achieve the goal.

Time management is an important study skill, an organized method for planning the use of your time to reach goals. It is believed that effective time management enables one to obtain a balanced way of life demands (create a strong pattern in your schedule; create time for study and leisure). Teaching students to approach academic tasks with a plan is a viable method for promoting self-regulation and learning skill. Planning can help students self-regulate their learning before engaging in learning tasks which is an essential proactive characteristic.

By establishing their own learning goals and finding motivation to make progress toward those goals, students are more likely to persist through difficult learning tasks and often find the learning process more fulfilling (Wang & Holcombe, 2010). In order to self-regulate, learners must be able to control their attention. Attention control is a cognitive process that requires significant self-monitoring and entails clearing the mind of distracting thoughts, as well as seeking suitable environments that are conducive for learning (e.g., quiet areas without distractions). Thus, teaching students to attend to learning tasks should be a priority. Teachers can help their students control their attention by removing stimuli that may cause distractions, and providing students with frequent breaks to help them build up their attention spans as students' academic outcomes would likely increase with focused time spent on-task.

Successful learners are able to implement multiple learning strategies across tasks and adjust those strategies as needed to boost progress towards their desired goals. On the contrary, most students, especially those in the lower grades, typically do not have a large repertoire of learning strategies and skills at their disposal. It takes time for students to learn and become comfortable with different learning strategies. By modelling how to use new strategies and providing appropriate amounts of scaffolding as students practice, teachers support students to identify their own learning goals, plan and monitor their own learning as well as evaluate their own learning outcomes, and can help learners become independent strategy users. According to Ness, B. M. and Middleton, M. J. (2011), for students to have metacognitive skills (ability to plan), means that they are able to recognise their own cognitive abilities, direct their own learning, evaluate the performance, comprehend what caused their successes of failures, and learn new strategies

III. Methods

The Study adopted both quantitative and qualitative research paradigms into consideration to conduct this research. The descriptive survey design was used to collect quantitative data, with the aid of a questionnaire and a quasi-experimental design was used in conducting this study. In addition, to collect qualitative data, the ethnographic and phenomenological approach with the aid of an Interview Guide was used in conducting this study. To answer the research question, copies of questionnaire were administered to a sample of 451 participants and data from the 451 participants were effectively analysed, from which conclusions were drawn.

Data were analysed using both descriptive and inferential statistics. To this effect descriptive statistics such as percentages, mean and standard deviations were used. Data were analysed using SPSS version 20.0 and Microsoft Excel 2010. The effect of planning skills as a correlate of self-regulated learning skills on learning outcomes of adolescents in secondary schools was quantified to obtain the effect score for (planning skills). This was computed for individual cases and for the entire study population to obtain the overall effect.

Data were screened for reliability using the Cronbach's Alpha test and it was evident that the internal consistency was not violated for all the conceptual components including the integrated value mapping (IVM) as Alpha values were all greater than 0.5. The data was then validated for analysis. In examining the relationship between self-directed planning skills as a correlate of self-regulated learning skills and learning outcomes, a correlation coefficient and level of significance were used to evaluate the relationship between learning outcome and each of the variables under observation. A positive value for R indicated a positive correlation and the p-value indicated the level of significance of the relationship.

For the quasi-experiment design, a comparison was made for the mean score between the control group and the experimental group for both the pre-test and the post-test. The scores of the post-test and the pre-test were also categorized into two groups; those who performed above average and those who performed below average and compared using chi-square test of equality of proportion.

As for qualitative data, notably perceptions of students on how planning skills with regards to learning and understanding could be improved; content thematic analysis was used to organize ideas or viewpoints under umbrella terms with the support of Atlas Ti 5.2. All statistics were discussed at the

95%, CL (Alpha=0.05) and presented using statistical tables and charts. The findings are presented following the research questions of the study.

IV. Measures

Items were measured with the aid of a 5-point Likert scale questionnaire where by respondents were required to state how they feel about each item, by stating whether they strongly agree (SA), agree (A), disagree (D), strongly disagree (SD) and undecided (U), pertaining to the variables of the study. To facilitate analysis, responses were further collapsed into three categories (agreed, undecided and disagreed) as clearly shown in table 1.

Table 1: Distribution of indicators of self-directed planning skills and learning outcomes

Items	A	U	D	N
I set goals of learning that I want to achieve	417 (92.5%)	23 (5.1%)	11 (2.4%)	451
I draw up a reading timetable for myself to plan for reading so as to master the learning goals	392 (86.9%)	27 (6.0%)	32 (7.1%)	451
I always jot down difficult concepts when reading	381 (84.5%)	43 (9.5%)	27 (6.0%)	451
I always make a list of difficult questions when studying	321 (71.2%)	79 (17.5%)	51 (11.3%)	451
I usually think of which friends can give me help with difficult problems	377 (83.6%)	40 (8.9%)	34 (7.5%)	451
I take note of important ideas and concepts when studying	401 (88.9%)	33 (7.3%)	17 (3.8%)	451
I always make a list of questions to ask my teachers	277 (61.4%)	91 (20.2%)	83 (18.4%)	451
When I summarize I put down ideas in my own words	377 (83.6%)	46 (10.2%)	28 (6.2%)	451
I do not only read the teacher's notes but consult other materials as well	352 (78.0%)	54 (12.0%)	45 (10.0%)	451
I usually read the chapter before the lesson is given	228 (50.6%)	104 (23.1%)	119 (26.4%)	451
I usually choose a quiet and comfortable place to study	365 (80.9%)	52 (11.5%)	34 (7.5%)	451
I know when it is appropriate for me to play	322 (71.4%)	79 (17.5%)	50 (11.1%)	451
I plan for a weekly schedule for studies and follow it up strictly.	271 (60.1%)	90 (20.0%)	90 (20.0%)	451
I come up with objectives when studying	290 (64.3%)	78 (17.3%)	83 (18.4%)	451
I just read and understand the information the teacher gives me in class without analysing	157 (34.8%)	72 (16.0%)	222 (49.2%)	451
I have all the text books in all my subjects	194 (43.0%)	73 (16.2%)	184 (40.8%)	451
I always decide on which learning activity to pay attention to in order to learn	295 (65.4%)	70 (15.5%)	86 (19.1%)	451
I get easily carried away by other things from my plan.	246 (54.5%)	70 (15.5%)	135 (29.9%)	451
I have difficulty making up my mind about things	240 (53.2%)	68 (15.1%)	143 (31.7%)	451
I have trouble making plans to help reach my goals	245 (54.3%)	48 (10.6%)	158 (35.0%)	451
Multiple Response Set (MRS)	**6148 (68.2%)**	**1240 (13.7%)**	**1632 (18.1%)**	**9020**

As shown in table 1, the responses of students indicated that most students were conscious on the efforts they put in planning while learning in school. Very few responses (13.7%) were 'undecided', indicating that a lesser proportion of students were unconscious on whether they plan or not when learning.

However, majority of the responses were in agreement with statements suggesting different aspects of planning carried out by high school students (MRS=68.2%, n=9020). This is evidence that proper planning is common among high school students and contributes largely to learning outcome. Setting goals (92.5%), taking notes of important ideas and concepts when studying (88.9%) and drawing up a reading timetable to follow (86.9%), are amongst the top shared ideas related to planning among students. In general, students agreed to majority of the statements relating to planning.

The least shared ideas were "I just read and understand the information the teacher gives me in class without analysing" (34.8%), and "I have all the text books in all my subjects" (43.0%). This suggests that some aspects of "note taking" and organization are lagging in high school students.

V. Findings

Table 2: Correlation test depicting the relationship between self-directed planning skills in students and aspects of learning outcomes

Learning outcomes	Planning	
	r	p-value
Contributing to classroom discussions	0.042	0.370
Confidently communicating with teachers and peers	0.097	0.038*
Exploring and trying new things learnt	0.064	0.174
Transfer and adapt knowledge to real life situations	0.065	0.165
Ability to plan, self-monitor and self-evaluate.	0.036	0.449
Overall statistics	**0.120**	**0.010***

In examining the relationship between self- directive planning skills in students and outcome of learning, a correlation test is used as shown in table 2. The correlation test in the above table indicates that all the different concepts of learning outcome have a positive relationship with planning. This simply means that the more students gain skills in planning, the more likely they can perform better in classroom learning.

Though the relationship between self-directed planning skills and learning outcome is weak, the correlation coefficient is positive for all the different aspects of learning and overall, it is statistically significant ($r = 0.120$; $p=0.010$) at the 95% confident level. This significant value clearly shows that there is a significant relationship between self-directed planning skills and learning outcomes of students. Thus, the null hypothesis is therefore rejected while the alternative is retained.

VI. Discussion of findings

The analysis of data predicted that a significant number of students were in agreement, suggesting different aspects of planning carried out by high school students. It equally shows that proper planning is evident among high school students and contributes significantly to learning outcomes. When specific learning skills were examined, they further confirmed the results as setting goals, taking note of salient concepts and ideas when studying, drawing up a reading timetable to follow, summarization of main ideas when studying were among the high skills exhibited relating to planning.

In examining the relationship between self-directed planning skills of students and outcome of learning, a correlation test was used. Based on the correlation test, it was realised that all the different concepts of learning outcome have a positive relationship with planning. This simply means that the more students gain skills in planning, the more likely they can perform better in classroom learning.

Though the relationship between planning and learning outcome was weak, the correlation coefficient was positive for all the different aspects of learning and overall, it was statistically significant. Thus, the null hypothesis was therefore rejected while the alternative is retained. These findings are consistent

with the works of (Elliot, 2010) in which 132 students were asked to identify factors that they considered important in learning and most of them cited planning.

Findings from the thematic analysis in relation to the perception on how learning and understanding could be improved in different study areas showed that a majority of students were of the opinion that management of study time as a component of planning is important and that they need to be taught learning strategies while another group of students indicated that students on their part need to internalize positive learning attitudes. Students' perceptions relating to this aspect include; more time should be given for individual study, personal study time table will help, give me enough time to study on my own, proper planning of my learning activities, teachers should change teaching methods and strategies and we should read textbooks and make our own notes.

Because self-regulated learning takes place over time, before (planning) which precedes the learning tasks; during (monitoring) which takes place during learning; and after (evaluating) which occurs immediately after learning to access, it does not need specific levels of ability of intelligence (Ryan et al, 2002), instead it considers learning about the practices and the benefits. Students in classrooms who encourage self-regulated learning exhibit higher levels of concentration and behaviour directed towards the achievement of educational and personal goals. They truly believe they can learn and improve outcomes; they devote more time to their tasks, process information deeply, and exhibit autonomy and greater levels of effort.

Unlike students in these classrooms who are aware to develop their skills by selecting their own activities and taking initiative in acquiring both subject and strategy knowledge, their counterparts in classrooms that involve limited scope of skills, do less well, achieve lower in academic outcomes measures (Ness& Middleton, 2011). and classroom activities are closely dependent on the teacher. Findings for this study show the following characteristics as such; teachers should give us notes or teachers should give us well organized notes, notes should be photocopied and given to students, teachers should check students' notes and explain them very well, teachers should ask questions as they teach, teachers should teach us how to learn and to answer questions, teachers should explain everything slowly and be there always and the best way to teach is to use charts, pictures and practical.

This is inconsistent with help-seeking: indicating student-initiated efforts to solicit help from peers or teachers. Self-regulation can be enhanced by appropriate guidance, modelling of effective learning strategies and skills development which are developed way back from early childhood to adolescence during which the aim of education may be focused on self-regulation and skills. This gives a proper transition to autonomy which is an important dimension in self-regulation. This is consistent with Chang (2005) who established that low ability students benefit slightly more from learning strategies. However, it could be observed that many other students in the classroom are yet not willing or lack the skills to take responsibility for their own learning as shown in the information above. They feel coerced to achieve learning goals, scoring lower on academic outcomes or performance (Long, 2012). This finding indicates that for most subject areas, it is important to instruct students in learning strategies in order to improve performance. This might account for the reason why many teachers may still be dominating in classroom activities as 2.7% of students indicated that they only study when the teacher asked them questions.

From the findings, high school students from the different institutions suggested many other solutions that could improve on learning and understanding in different subject areas. It also shows that most of the students believed proper planning and effective time management can improve on their learning, though for different reasons. While some students think planning enables them to work on all subjects, others think if time is well managed, their grades will significantly improve. Planning according to some students encourage them to go beyond their limits and for another group of students, proper planning creates awareness and consciousness in students, improves their learning, helps them to be focused and devoted. In general, planning largely contributes to learning as students agreed to majority of statements relating to planning.

Consistent with this study, Azevedo & Cromley (2006) investigated the relationship between academic success and use of goal planning, weekly monitoring, and evaluation forms within an online class to promote the use of self-regulated learning strategies with two sections of undergraduate students (n=28). Azevedo & Cromley (2006) administered the MSLQ pre-intervention and post-intervention and compared results with average quiz scores of the two sections of students. The strength of the relationship between the worksheets and the participants' perceived ability to self-regulate in an online course was strong, as assessed by the partial $\eta 2 = .25$. The goal analysis sheets and self-regulated worksheets accounted for 25% of the score variance on the post-test MSLQ. Based on these results, participants in the experimental group of this study appeared to increase their ability to self-regulate as measured by the increase in their scores on the final MSLQ. Although students with higher self-regulatory skills had higher average quiz scores, they were not statistically significantly higher than those participants in the comparison group who did not show increased ability to use self-regulatory skills based on their post-MSLQ scores. Findings in this area were not statistically significant to support the literature which argues that increased self-regulated learning ability leads to academic success (Zimmerman & Martinez-Pons, 1988).

VII. Implications of findings

The findings from this study are outstanding because they provide greater insight into understanding planning skills and its influence on adolescent learners learning outcome in Southwest region of Cameroon. The findings also confirm the supposition that adolescents in other emerging economies, adolescents in Southwest region of Cameroon within their different schools; make use of planning skills which has a positive influence on their learning outcomes.

In fact, the results of this study indicate that, self-directed planning skills, correlates with adolescent learners' learning outcomes. Such skills can also be instilled onto learners by teachers and educators so as to improve upon the learning outcomes of learners within classrooms and school settings. In this light, the findings of this study are relevant and can be considered as an addition to the existing literature on planning skills and learning outcomes as clearly shown below:

To begin with, the findings would permit readers to know more and gain useful insights about planning skills as revealed by this study and how it contributes positively to adolescent students learning outcomes. More so, it would also enable readers to know more and understand that planning skills are very important in enhancing positive learning outcomes as revealed by this study.

In addition, this study brings to knowledge, most importantly, classroom curriculum and accompanying assessment systems should be organized in ways that support and cherish independent autonomous practices and strategic problem solving. The practice should help students become independent learners by using different kinds of cognitive and metacognitive and planning skills to improve upon their learning outcome.

It has also shown that if students are taught planning skills, it gives them the ability to plan, monitor and evaluate their own learning progress as they choose preferred or desired learning skills according to their needs and therefore would persist to achieve desired goals.

This study focusing on self-directed planning skills and adolescent students learning outcomes; it is hoped that it will become a topic of classroom discussion in contextual teaching and explicit goal for education as comprehending the nature of self-regulation and how it is nurtured as a possible function and the relationships in the teaching-learning process. This would help stress how even teachers design and scaffold learning experiences that lead students to thought-provoking and stimulating to model the teachers on how to learn. Students benefit from seeing how they can use what they learn. Planning skills are generic and thus can be applied to different content, but their implementation may vary according to the different content area.

Finally, the establishment of an important link of indicators between planning skills and learning outcomes among adolescent students is an important contribution of this study to science. The provision of data and knowledge from the developing world (secondary schools in Fako division, Southwest region

of Cameroon) that is complementary to universal knowledge about planning skills and how it fosters learning outcomes among adolescent students, thereby contributing to global databases on self-regulated learning students. A methodological contribution of an in-sider perspective of understanding planning skills and learning outcomes among adolescent students, by investigating and planning skills and learning outcomes among adolescent students based on their own voices (adolescent's students of Fako division, Southwest region of Cameroon).

VIII. Conclusion

Learning is an important aspect of human life. The way one learns is most important because the 'how', 'why', and 'when' of learning determines the rate of recall of what has been learnt. The concept of SRLS is based on the idea that the student is firstly an active, independent, autonomous participant in the learning process and not passive and secondly employ personalised learning skills to facilitate learning. The study found out that planning, self-monitoring and self-evaluation all affect students' learning positively. Therefore, self-regulated learning skills is a primary predictor of students; learning motivation and improved outcomes. The purpose of this study was to examine the relationship between self-directed planning skills as a correlate of self-regulated learning and learning outcomes among adolescent students. To achieve this, a questionnaire was administered to a sample of 451 participants (adolescent students) and data from the 451 participants were effectively analysed from whom conclusions were drawn. The data derived were subjected to descriptive and inferential statistical analysis using the Statistical Package for the Social Sciences (SPSS) Version 20.0. The findings showed that there was a significant relationship between self-directed planning skills and learning outcomes among adolescents (r= 0.120, n = 451, p< 0.05).

IX. Recommendations

From the findings of this study, the following recommendations are proposed:

- Teachers should guide students on how to plan their studies especially when it comes to classroom discussions, transfer of learning as well as trying new things.
- Teachers should be flexible during lesson delivery and make sure they teach both content and self-regulated learning skills to students in order to empower them to be autonomous life-long learners. Base on this, teachers should also guide students on how to plan their studies in terms of time, space and leaning strategies.

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