Journal of Pedagogy, Andragogy and Heutagogy in Academic Practice (JPAHAP)
ISSN: 2708-261X, *Vol 4. No.4 (2023) pp 62-79* http://uonjournals.uonbi.ac.ke/ojs/index.php/pedagogy

ASSESSING THE ACHIEVEMENT GOALS AND STUDY STRATEGIES OF IN-SERVICE TEACHERS OF DEGREE PROGRAMME IN NIGERIA

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ABSTRACT

Students' study strategies and goal orientations direct their effort and performance, serving as a form of motivation to accomplish an academic task successfully. Hence, this study was designed to assess the achievement goals and study strategies of in-service teachers of degree programmes in the Southwestern part of Nigeria. Using descriptive research design, the study population consists of all the students of the sandwich degree programme of Federal Universities in Southwestern Nigeria. A sample size of six hundred students was selected across the five levels of the degree programme in three selected federal universities using proportionate stratified sampling techniques. Data were gathered with a self-constructed questionnaire titled "Study Strategies Achievement Goals Questionnaire (SSAGQ) which has a Cronbach Alpha reliability value of 0.83.

The data were analyzed with descriptive and inferential statistical methods. The findings revealed that sandwich students had a higher tendency towards surface strategy than deep strategy and also had performance goals than learning goals. The result further revealed a positive relationship between students' study strategies and their achievement goals. It was suggested that educational institutions should clearly articulate their learning agenda and seek ways to align it with their students' learning agenda in a way that demands deep content knowledge for all students.

Keywords: Study strategies, Achievement goals, Teachers' Education, Sandwich degree.

INTRODUCTION

Recent progress in education and technology has led to an altitudinous rise in the population of students in universities. Like any other country in the world, university education in Nigeria is one of the types of education given after secondary school education with a duration of between four and six years depending on the course being offered by the students. To satisfy individuals' quest for knowledge and cope with growing societal demand by school learners and adult workers seeking an opportunity to acquire a university education, there has been a surge in demand for university education in recent years

(Adeyemi, 2001; Kaur., Noman, & Awang-Hashim, 2019).

Just as the influx of students rises over the years in the universities nationwide, the country has had the cause to make tertiary education available for all qualified individuals. This resulted in the birth of part-time degree programmes in tertiary institutions.

Degree programmes in Nigerian universities are courses that have the goal of contributing to national development through high-level relevant manpower training and provision of both physical and intellectual skills that will enable individuals to be self-reliant and useful members of society. The programmes prepare students for more specialized study in the institution by qualifying them for professional activities or employment. The students have the opportunity to offer professional courses in accordance with the national needs of the country. The teacher education degree programme is one of the professional courses offered in Nigerian universities. Jekayinfa (2011) stated that adequate teacher preparation is an asset to the country because no educational system can rise above the quality of its teaching force.

Therefore, qualified teachers are needed for quality education, which is indispensable for social change, social transformation, and national development.

The universities that embark on the teachers' education programmes are expected to provide the pre-service teachers with intellectual and professional backgrounds adequate to make them fit for the country's educational system.

The sandwich degree programme is in-service training for primary and secondary school teachers. It is a type of part-time degree programme in teachers' education that provides an opportunity for in-service teachers who for certain reasons, cannot leave their full-time work responsibilities to attend a full-time conventional teachers' education programme in the university. The degree programme has its contact periods defined as during the holidays for the teachers on the job. The period of the programme helps students to gain access to full-time studies, though for a longer period, and helps them to share the higher institution community life experiences and ensure that the trainees enhance their educational improvements.

The programme also provides opportunities to many people who would have previously been denied access to full-time degree teachers' education programme based on where they live and work, poor economic circumstances, social status, etc., (Odu & Akanle, 2009).

Participants of the sandwich degree programme most times often have other full-time engagements in terms of work, marriages, and other engagements (Ikeoji, Agwubike & Ideh, 2007). Having established the above fact, it is good to note that degree programmes in universities are aimed at making individuals acquire both physical and intellectual skills to be self-reliant and useful members of society. It will also be an impetus for driving positive changes in conduct, making them feel encouraged and their work responsibility (Asiyai, 2016; Ehinola & Akomolafe, 2022). To achieve this fact, students on the programme need to engage in self-regulatory learning.

LITERATURE REVIEW

Self-regulation is an important aspect of student learning in academic performance. It demands that students take control of the learning process to achieve their goals in the study. Much of this control comes from the student's desire to learn and perform well on academic tasks, and these desires are reflected in the goals that students select for learning and performance (Pintrich, 2005). Hence, self-regulated learning involves achievement goal setting, metacognition, and the use of cognitive strategies. Every day students are confronted with several decisions about what, when, and how to study. Understanding the factors underlying these decisions is essential in helping students become successful learners as effective achievement goals and study strategies can influence educational outcomes.

Achievement goal theory describes general goal orientations that concern the reasons or purposes students are pursuing when approaching and engaging in a task (Vrugt & Oort, 2008). This theory originally stressed two general orientations to achievement: mastery and performance goals (Wolters, 2004). Achievement goals are generally defined in terms of competence, in particular, the reasons why individuals choose to engage in behaviours to demonstrate their competence. Achievement goals have also been defined in terms of violence, with a contrast between striving towards a positive outcome (i.e. approach) and avoiding a negative outcome (i.e. avoidance). As outlined by Elliot and McGregor (2001), this produces four distinct patterns of achievement goals: mastery approach, performance approach, mastery avoidance, and performance-avoidance. The mastery approach is reflected in students who strive toward achieving a high grade to reinforce their sense of having mastered the materials. The performance approach is reflected in students who strive toward achieving the highest grade possible relative to their peers.

Mastery-avoidance or perfectionistic students are students who aim to achieve a high grade by avoiding mistakes while performance-avoidance students are primarily interested in not failing the class. Above all, mastery goals orient the student toward learning and understanding, developing a new skill, and a focus on self-improvement using self-referenced standards. Performance goals represent a concern with demonstrating ability, obtaining and a focus on high ability, protecting self-worth, and a focus on comparative standards relative to others, and attempting to surpass others.

Individual differences in achievement goals may account for differences in students' approaches to studying. Weissgerber, Reinhard, and Schindler (2016) found that mastery goals predicted students' self-reported use of a combination of strategies known to enhance long-term learning, including retrieval practice, distributed practice, generating answers, and inferring solutions to problems. The study by Gutman (2006) examined the effects of students' and parents' goal orientation and their perceived goal structures on grades and self-efficacy during their transition to high school in the context of their mathematics class. The study revealed that students who encouraged themselves to use mastery goals showed more positive changes in their grades and self-efficacy compared to college students who encouraged performance goals. Also, Leigh, et. al (2007) tested the relationship between learning strategies, motivation, self-efficacy, and student achievement in the context of an online developmental mathematics course. Their findings revealed that motivation, concentration, information processing, and self-testing along with self-efficacy significantly predicted academic achievement.

Moreover, achievement goal orientations have been found to correlate with strategies of learning. The situation of how the achievement goal orientations relate to students learning motions and strategies has been explored in several empirical studies (Albaili, 1998; Elliott & McGregor, 2001; Yip, 2007; Magnolia, 2012; Hartwig & Dunlosky, 2012; McAndrew, Morrow, Atiyeh & Pierre, 2016). Generally, students have their distinctive goal orientations when performing certain tasks.

Students' goal orientations direct their effort and performance, serving as a form of motivation to accomplish an academic task successfully (Magno, 2012). These goal orientations towards an academic task make an individual use effectively or ineffectively different learning and study strategies. Such strategies include how students process, examine, and construct information in ways that they can prepare and demonstrate the acquisition of knowledge in different areas

(Yip, 2007). These learning strategies include attribution of attitudes, interests, motivation, and discipline in achieving academic success.

Consequently, study strategies according to Cao and Nietfeld (2007), refer to intentional behaviours or thoughts that facilitate encoding in such a way that knowledge integration and retrieval are enhanced. These thoughts and behaviour constitute organized plans of action designed to achieve a certain goal. Leigh, et. al (2007) stated that study strategies can be expressed as the behavioural or cognitive manifestation of techniques, philosophies, or rules which aids the attainment, manipulation, assimilation, storage, and retrieval of information through different situations and settings. Moreover, study strategies also refer to the various techniques that students put in place or employ in achieving their study goals (Senko, Kama & Belmonte, 2013; Bas., Sentuck, 2018).

These techniques spread widely across the sectors of study habits which include styles of notetaking, listening and writing skills, time management, and all other educational activities that vary from student to student. These techniques when properly applied in accordance with a student's nature, enable such a student to achieve the goals he or she sets out from the beginning of a session.

Recent data have shown that some students are more likely to endorse effective study strategies than others. McAdrew, Morrow, Allyeh, and Pierre (2016) showed that academic performance, denoted by self-reported grade point average (GPA), predicts the degree to which students engage in strategies related to retrieval and spacing. In particular, higher-achieving students in relation to lower-achieving students are more likely to endorse retrieval practice that is, reporting that they test themselves over the material they are learning and are less likely to cram. Moreover, Carrier (2003) observed a positive correlation between active strategies and student academic performance. Active strategies, such as studying lecture notes, making chapter notes, outlining, and seeking the lecturer's assistance involve deep processing and are more likely to promote understanding of the course material. Although study strategies significantly predict students' achievement (Hartwig & Dunlosky, 2012), achievement alone might not be sufficient to account for the full range of individual differences. In particular, the achievement goals that students hold can vary and influence their approaches to study.

Cao and Nietfield (2007) examined the relationships between students' learning goals, study strategies, and class performance over a 14-week undergraduate course in educational psychology and found out that learning goals remained unchanged

over the semester while performance goals changed towards the end of the semester. Also, relationships were found between goals and test performances, but not between goals and study strategies, nor between study strategies and performances. Tao and Hong's (2000) study demonstrated that both performance and learning goal orientations were related positively to the academic efficacy of university students in Hong Kong. They argued that Chinese culture has a greater emphasis on social rather than individual endeavours and demonstrating one's performance.

The achievement goals and study strategies literature described above highlights the importance of systematically identifying and exploring students' motivational goals and strategies used in actual classroom settings. They emphasize mastery goals and performance goals that degree students perceive in universities. These goals they adopt appear to be important factors in their school behaviour and may have broader implications for adaptive development, especially for sandwich degree students. These goals interact in conflicting, converging, and compensatory ways to influence their academic motivation and performance in the university degree programme. For Nigerian sandwich degree students, the notion of performance goals may vary from those held in some Western cultures as noted by Tao and Hong (2000). Despite tremendous efforts, much remains to be known regarding the relationship among various forms of learning goals and the learning process among part-time degree students. In particular, the researchers have not come across research studies describing how part-time degree students assess and revise achievement goals, and how these goals relate to their study strategies and classroom performance over time.

The fact that global educational development of the country hinges on the quality and professional development of the in-service teachers, it is worthwhile to assess the achievement goals and study strategies of the in-service teachers who will carry their goal orientations into the classrooms which later influence the pupils' learning. Hence, the study specifically aimed to:

i. Find out the achievement goals held by sandwich degree students,

ii. Determine the study strategies adopted by the students,

iii. Establish the relationship between sandwich degree students' achievement goals (mastery and performance approach) and their study strategies (surface and deep strategies), and

iv. Determine whether significant differences exist in the achievement goals and study strategies of sandwich degree students across levels of study, gender, and age.

RESEARCH QUESTIONS

i. What are the achievement goals (mastery and performance approach) held by the sandwich students?

ii. What are the study strategies (surface and deep strategies) adopted by sandwich degree students?

RESEARCH HYPOTHESES

There is no significant relationship among sandwich degree students' achievement goals
(mastery and performance approach) and their study strategies (surface and deep strategies).

ii. There is no significant difference in the achievement goals and study strategies of sandwich students across levels of study, gender, and age.

METHODOLOGY

A descriptive research design was adopted for the study. This involves a detailed and critical examination of the achievement goals and study strategies of sandwich degree students to find out what is and how it is. The target population of the study consists of all sandwich degree students at Federal Universities in the Southwestern region of Nigeria in the 2021 contact session.

A sample size of six hundred sandwich degree students was selected across the Departments in the Faculty of Education and the five levels of study in three selected Federal Universities that undertake sandwich degree programmes, using proportionate stratified sampling techniques. A self-constructed instrument titled "Study Strategies Achievement Goals Questionnaire (SSAGQ) was used for data collection. The instrument was divided into three sections. The first section (Section A) contained demographic information of the respondents. The second section (Section B) comprises ten items on achievement goals which were designed to capture measures of mastery and performance approach.

The third section (Section C) is composed of ten items representing surface and deep strategies that are generic to the process of studying and learning. Participants rated themselves on each of the items using a four-point scale ranging from Very True of Me (4 points) to Not Very True of Me (1 point). The instrument was carefully examined by two experts with a specialization in educational psychology and educational measurement.

It was validated in terms of item format, clarity of language, ambiguity, suitability, and relevance of the items. The suggestions of the experts were implemented to produce the final draft. The reliability of the instrument was determined using the Cronbach Alpha method and a reliability co-efficient of 0.83 was obtained.

The participants were guided accordingly on how they responded to the items after seeking their consent. Data obtained were analyzed using appropriate statistical tools. The research questions raised in the study were answered using descriptive statistics of mean type while research hypotheses one and two were tested using regression analysis and multivariate analysis of variance respectively with the use of the Statistical Package for Social Sciences (SPSS). The hypothesis was tested at a 0.05 level of significance.

RESULTS

Research Question One: *What are the achievement goals (mastery and performance approach) held by the sandwich students?*

Responses on achievement goals of sandwich degree students analysed using mean rating were used to answer the question as shown below.

Table 1: Mean Analysis of Achievement Goals Held by Sandwich Degree Students

	Achievement Goals Held by Sandwich Students			
S/N	***Mastery Approach***	**Mean**	**SD**	**Rank**
1.	It is important to me that I learn a lot of new concepts	3.01	0.63	1st
2.	It is important that I thoroughly understand my lectures	2.50	0.71	3rd
3.	My aim is to completely master the course material for my programme	2.03	0.92	4th
4.	It is important to me that I thoroughly understand all my courses	2.10	0.95	5th
5.	My goal is to learn as much as I can	2.51	0.83	2nd
	Average Mean	**2.43**	**0.81**	
	Performance Approach	**Mean**	**SD**	**Rank**
6.	My aim is to achieve things that others cannot achieve	3.66	0.61	1st
7.	I am striving to perform well relative to other colleagues	3.52	0.74	3rd
8.	My goal is to enhance my professional ability	3.57	0.69	2nd
9.	It is important for me to improve my teaching skills	3.40	0.81	5th
10.	I am striving to have higher scores than other students	3.42	0.77	4th
	Average Mean	**3.51**	**0.72**	

Results in Table 1 show the ranking order of achievement goals held by sandwich students. As contained in the table, with respect to the mastery approach, item number 1 had a mean value of 3.01 and was ranked 1st, item number 5 recorded a mean score of 2.51 and was ranked 2nd, and item number 2 with a mean score of 2.50 was ranked 3rd.

Items number 3 and 4 recorded mean scores below the benchmark of 2.50 and as such were not considered as being held. With respect to performance approach, item number 6 with a mean score of 3.66 was ranked 1st, item 8 with a mean score of 3.57 was ranked 2nd, item 7 was ranked 3rd with a mean score of 3.52, item 10 was ranked 4th with a mean score of 3.42, and item 9 with a mean score of 3.40 was ranked 5th.

Averagely, the mastery approach has a mean value of 2.43 which was below the 2.50 benchmark, and the performance approach has an average mean value of 3.51 which is above the benchmark of decision. This means that the sandwich students hold the achievement goal of the performance approach higher than the mastery approach.

Research Question Two: *What are the study strategies (surface and deep strategies) adopted by sandwich degree students?*

Responses on study strategies adopted by sandwich degree students analysed using mean rating were used to answer the question as shown below.

Table 2: Mean Analysis of Study Strategies Adopted by Sandwich Degree Students

	Study Strategies Adopted by Sandwich Students			
S/N	**Surface Strategies**	**Mean**	**SD**	**Rank**
1.	Repeating words or terms in my head to remember them	3.33	0.76	1st
2.	Drawing diagrams or pictures to help me remember the information	2.56	0.92	5th
3.	Memorize lots of information before the test	3.12	0.78	2nd
4.	I adjusted my study approach to the format of the exam	2.61	0.81	4th
5.	When studying, I make up memory cues that I can use during test to help me recall materials	2.77	0.75	3rd
	Average Mean	**2.89**	**0.81**	
	Deep Strategies	**Mean**	**SD**	**Rank**
6.	Asking my lecturers about concepts I do not understand	2.31	0.83	3rd
7.	Attending tutorial classes organized for my courses	2.54	0.77	1st
8.	Understanding how I might apply what I am learning	2.11	0.86	4th
9.	Spend more time reading my course material after the class	2.01	0.92	5th
10.	Test myself with	2.44	0.81	2nd

	questions or practice problems			
Average Mean		**2.28**	**0.84**	

The result in Table 2 shows the ranking order of study strategies adopted by sandwich students. As contained in the table, with respect to surface strategy, all the items recorded a mean score above the benchmark of 2.50 used in making a decision, and the items were ranked in the order of magnitude of their mean to indicate the hierarchical order of how the strategies are been adopted. On the other hand, the items measuring deep strategies recorded mean scores below the benchmark of 2.50. On the whole, surface strategies recorded an average mean of 2.89 while deep strategies recorded an average mean of 2.28. This indicates that sandwich degree students at the university of Ilorin adopted surface study strategies more than deep study strategies.

Hypothesis One: *There is no significant relationship among sandwich degree students' achievement goals (performance approach and mastery approach) and their study strategies (surface and deep strategies).*

To test hypothesis one, a Regression Analysis was conducted for the variables and the summary of the analysis is shown in table 3.

Table 3: Regression Analysis Showing Relationship among achievement goals (performance approach and mastery approach) and study strategies (surface and deep strategies)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	240.494	2	120.247		
Residual	2437.386	597	4.082	29.458	.000[b]
Total	2677.880	599			

a. Dependent Variable: Study Strategies; b. Predictors: (Constant), achievement goals (performance approach and mastery approach).

Results in Table 3 indicate that the variable of achievement goals of performance approach and mastery approach contributed significantly to sandwich degree students' study strategies as seen in the degree of freedom of 2 and 597, with an F ratio of 29.458 that is significant at p = .000. On the basis of the results, the null hypothesis is not accepted. This means that there is a significant relationship among sandwich degree students' achievement goals (performance approach and mastery approach) and study strategies.

To examine the contributions of the independent variables (performance approach and mastery approach) together, results of Standard Error, Beta, and T were computed, and the output was reported as shown below in Table 4.

Table 4: Relative contributions of performance approach and mastery approach to study strategies

Model	(B)	Std. Error	(Beta)	(t)	Sig.
(Constant)	27.577	1.258		21.914	.000
Performance Approach	.497	.093	.296	5.340	.000
Mastery Approach	.033	.038	.048	.866	.387

Results in Table 4 revealed the contribution of each of the independent variables to the model. It reveals that the achievement goal of the performance approach contributed a Beta weight of .296 and a t-value of 5.340 which is significant at .000. Achievement goal of the mastery approach contributed Beta weight of .048 and a t-value of .866 and it is not significant to sandwich degree students' study strategies at .387. However, both variables contributed to sandwich degree students' study strategies, but only the contribution of the performance approach is significant.

Hypothesis Two: *There is no significant difference in the achievement goals and study strategies of sandwich degree students across levels of study, gender, and age.*

To test hypothesis two, a Multivariate Analysis of Variance was conducted for the variables and the summary of the analysis is shown in table 5.

Table 5: Multivariate Analysis of difference in the achievement goals and study strategies of sandwich degree students across the levels of study, gender and age

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.991	15131.077[b]	2.000	290.000	.000
	Wilks' Lambda	.009	15131.077[b]	2.000	290.000	.000
	Hotelling's Trace	104.352	15131.077[b]	2.000	290.000	.000
	Roy's Largest Root	104.352	15131.077[b]	2.000	290.000	.000
Level of Study	Pillai's Trace	.112	4.319	8.000	582.000	.000
	Wilks' Lambda	.890	4.358[b]	8.000	580.000	.000
	Hotelling's Trace	.122	4.397	8.000	578.000	.000
	Roy's Largest Root	.101	7.321[c]	4.000	291.000	.000
Gender	Pillai's Trace	.029	4.323[b]	2.000	290.000	.014
	Wilks' Lambda	.971	4.323[b]	2.000	290.000	.014
	Hotelling's Trace	.030	4.323[b]	2.000	290.000	.014
	Roy's Largest Root	.030	4.323[b]	2.000	290.000	.014
Age	Pillai's Trace	.030	1.493	6.000	582.000	.178
	Wilks' Lambda	.970	1.496[b]	6.000	580.000	.177
	Hotelling's Trace	.031	1.500	6.000	578.000	.176
	Roy's Largest Root	.029	2.798[c]	3.000	291.000	.040

a. Design: Intercept + Level of Study + Gender + Age

b. Exact statistic

The result in Table 5 shows that there is a significant difference in the achievement goals and study strategies of sandwich students across levels of study and gender. This is evident with the F-calculated value of 4.358 and p-value of 0.00 for the level of study and F-calculated value of 4.323 and p-value of 0.01 for gender which are less than 0.05 level of significance (0.00 and 0.01 < 0.05).

Since the p-values are less than 0.05 level of significance, the null hypothesis is not accepted for level of study and gender. However, there is no significant difference in the achievement goals and study strategies of sandwich degree students based on age. This is evident with the F-calculated value of 1.496 and p-value of 0.177. Table 6 shows the variables where differences were observed.

Table 6: Tests of Between-Subjects Effects (Differences)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Study Strategies	87.733[a]	8	10.967	1.232	.280
	Achievement Goals	1614.906[b]	8	201.863	11.648	.000
Intercept	Study Strategies	239932.798	1	239932.798	26956.172	.000
	Achievement Goals	152331.323	1	152331.323	8789.582	.000
Level of Study	Study Strategies	54.617	4	13.654	1.534	.192
	Achievement Goals	487.918	4	121.980	7.038	.000
Gender	Study Strategies	44.121	1	44.121	4.957	.027
	Achievement Goals	32.983	1	32.983	1.903	.169

The result in Table 6 shows a significant difference in achievement goals of sandwich students across levels but no significant difference was observed with respect to study strategies. This is evident in the F-value of 7.038 and p-value of 0.000. Also, the significant difference observed with respect to gender was in the area of study strategies which is evident in the F-value of 4.957 and p-value of 0.027 but not in the area of achievement goals.

DISCUSSION

The study was conducted to assess the achievement goals and study strategies of sandwich degree students at Federal Universities in the Southwestern Region of Nigeria. Findings from the study revealed that the sandwich degree students hold performance approach achievement goals higher than the mastery approach. The sandwich degree students in the study recognize that their success in the degree programme is by being better than another person.

This reveals that students demonstrate a lack of ability just to gain self-approval of self-esteem in front of other people. This result is consistent with Elliot and McGregor (2001); Chan (2008); Pulkka and Niemivirta (2013).

The performance approach achievement goals were held above the mastery approach because the students aimed at the personal emphasis of having higher grades above other students than having deep processing, integration, sustained effort, and involvement in skill demonstration. Consequently, this will not allow them to delve into or explore content taught and also apply knowledge gained which leads to fear of failure as Elliot and McGregor (2001) rightly observed that when students want to earn better grades than others, they also worry about the possibility of getting bad grades, which is especially the case for less effective self-regulators.

The findings of this study also revealed that sandwich degree students adopted surface study strategies more than deep study strategies. It was found out that repeating words or terms in their head to remember them has the highest mean in the surface study strategies. This finding is supported by Justice and Dorman (2001); Cao and Nietfeld (2007); Howell and Watson (2007); Vrugt and Oort (2008); and Magnolia (2012) who reported that rehearsal strategies are predominant among college students, while more advanced approaches such as applying concepts and elaboration/organization lagged far behind. This result is in line with the characteristics of students who endorsed performance goal orientation when students are more concerned with how they are being judged by others and try their best to outperform their mates with minimum effort. The concern could be accomplished by the use of surface strategy such as rehearsal and memorization of information.

Moreover, this study found that there is no significant relationship among sandwich degree students' achievement goals (performance and mastery approach) and their study strategies. The performance approach was found to be significantly related to study strategies while there is no significant relationship between the mastery approach and study strategies.

This is supported by Tao and Hong (2000); Bernardo (2008); and Hartwig and Dunlosky (2012). This can be explained that when students socialize and affiliate with their peers, there is an increase in performance and intrinsic task engagement. However, this finding is contrary to Kong and Hau (1996) who observed a significant relationship between the mastery approach and study strategies. It was reported that students who adopted mastery goal orientation tended to use deeper processing strategies. This is understandable as students holding learning goals emphasize self-improvement and real mastery. The main concern is the complete understanding of the subject matter and self-satisfaction which could be attained by the use of deep strategies in learning such as elaboration and organization which result in greater transformation of information and

consequently require more cognitive activity and efforts on the part of the students.

This study further revealed that there is a significant difference in the achievement goals and study strategies of sandwich degree students based on level of study and gender, but no significant difference on the basis of age. This finding agrees with Brew (2002) and Vrugt and Oort (2008) who found out that metacognition, achievement goal, study strategies, and academic achievement differ among students based on gender. Their result revealed that female students are more engaged in metacognitive activities than males. It was reported that female university students who were effective self-regulators made more use of resource management, and metacognitive strategies and obtained higher exam scores than male effective self-regulators. The findings of this study show no significant difference in the achievement goals and study strategies based on age is contrary to Vrugt and Oort (2008) who found that younger students were more effective self-regulators than older students. It was indicated that older students find it difficult to devise a structured study regimen and to adequately utilize study strategies.

CONCLUSION

This study revealed that sandwich degree students focused more on performance approach orientation goals than mastery approach orientation goals. This has led them to uphold the surface study strategies above deep study strategies. They are more influenced by impending deadlines than by a planned study schedule. A mastery but not performance structure provides a context that is likely to foster long-term use of learning strategies.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

The universities should inaugurate goal-setting intervention programmes for sandwich students that are aimed at getting students to establish realistic but challenging goals. This will enhance effective mastery structure.

The nature of students' experiences in the lecture rooms should be modified to provide a viable way of redirecting students' achievement goal orientation.

Lecturers should clearly articulate their own learning agenda and also seek ways to align it with their students' own learning agendas, ideally in a way that demands deep topic knowledge for all students.

REFERENCES

1. Adeyemi, J. K. (2001). Equality of access and catchment area factor in University admissions in Nigeria. *Higher Education*, *42*(3), 307-332. https://doi.org/10.1023/A:1017965905830
2. Albaili, M. A. (1998). Goal orientations, cognitive strategies and academic achievement among United Arab Emirates College Students. *Educational Psychology, 94*(2), 381-395.
3. Asiyai, R. I. (2016). Relational study of in-service training, teaching effectiveness and academic performance of students. *Journal of Teaching and Education*, *5*(2), 205-216.
4. Bas, G., & Senturk, C. (2018). An Evaluation of Technological Pedagogical Content Knowledge (TPACK) of In-Service Teachers: A Study in Turkish Public Schools. *International Journal of Educational Technology*, *5*(2), 46-58.
5. Bernardo, A. B. I. (2008). Individual and social dimensions of Filipino Students' achievement goals. *International Journal of Psychology*, *43*(5), 886-891. https://doi.org/10.1080/00207590701837834
6. Brew, C. R. (2002). Kolb's learning style Instruments: Sensitive to Gender. *Educational and Psychological Measurement*, *62*(2), 373-390. https://doi.org/10.1177%2F0013164402062002011
7. Cao, L. & Nietfeld, J. L. (2007). Examining relationships between achievement goals, study strategies and class performance in Educational Psychology, *Teaching Educational Psychology*, *2*(10), 1-20.
8. Carrier, L. M. (2003). College Students' choices of study strategies. *Perceptual and Motor Skills*, *96*(1), 54-56. https://doi.org/10.2466%2Fpms.2003.96.1.54
9. Chan, D.W. (2008). Goal orientation and achievement among Chinese Gifted Students in Hong Kong, *High Abilities Studies*, *19*, 37-51.
10. Ehinola, G. B., & Akomolafe, B. B. (2022). In-service training programmes and mentoring for improving teachers 'job performance in North Senatorial District of Ondo State, Nigeria. *International Journal of Educational Research & Review*, *3*(1), 1-7
11. Elliot, A. J. & McGregor, H. A. (2001). A 2x2 Achievement goal framework, *Journal of Personality and Social Psychology*, *80*, 501-519. https://psycnet.apa.org/doi/10.1037/0022-3514.80.3.501

12. Gutman, L. M. (2006). How Student and Parent goal orientations and Classroom goal structures influence the Mathematics achievement of African Americans during high School transitions. *Contemporary Educational Psychology*, *31*(1), 44-63.
13. Hartwig, M. K. & Dunlosky, J. (2012). Study strategies of College Students: Are self-testing and scheduling related to achievement? *Psychonomic Bulleting & Review*, *19*(1), 126-134. http://doi: 10.3758/s13423-011-0181-y.
14. Howell, A. J. & Watson, D. C. (2007) Procastination: Association with achievement goal orientation and learning strategies. *Personality and Individual differences*, *43*(1), 167-178. http://doi:10.1016/j.paid.2006.11.017
15. Kaur, A., Noman, M., & Awang-Hashim, R. (2019). Exploring and evaluating differentiated assessment practices of in-service teachers for components of differentiation. *Teaching Education*, *30*(2), 160-176.
16. Ikeoji, C. N.; Agwubike, C. C. & Ideh, V. (2007). The role of sandwich in-service program in developing Agricultural Science Teachers in Delta State, Nigeria. *Journal of Agricultural Education*, *48*(1), 97-105. http://doi:10.5032/jae.2007.01097
17. Jekayinfa, A. A. (2011). Proposed Curriculum innovation for the Nigeria Teacher Education Programmes to meet the global challenges. In D. O. Durosaro & A. A. Adegoke (Eds.) *Higher Education and Globalisation*, (125-133). Stirling-Horden Publishers Ltd.
18. Justice, E. M. & Doman, T. M. (2001). Metacognitive differences between traditional-age and non-traditional age College Students, *Adult Education Quarterly*, *51*(3), 236-249. http:// doi:10.1177/074171360105100305
19. Kong, C. K. & Hau, K. T. (1996). Students' achievement goals and approaches to learning: The relationship between emphasis on self-improvement and thorough understanding. *Research in Education*, *55*(1), 74-85. https://doi.org/10.1177%2F00345237 9605500107
20. Leigh, M. W. Husman, J.; Duggan, M. A.; & Pennington, M. N. (2007). Online Mathematics achievement: Effects of learning strategies and self-efficacy, *Journal of Developmental Education*, *30*(3), 6-13. https://www.jstor.org/stable/4277524 2

21. Magnolia, C. (2012). Assessing Students' study strategies and achievement goals. *The International Journal of Educational Psychology Assessment, 12*(1), 108-131.
22. McAndrew, M.; Morrow, C.S.; Atiyeh, L. & Pierre, G. C. (2016). Dental Students' study strategies: Are self-testing and scheduling related to academic performance? *Journal of Dental Education*, *80*(5), 542-552. http://www.jdentaled.org/content/80/5/542
23. Odu, B. K. & Akanle, F. F. (2009). Promoting Teacher's effectiveness through Sandwich Degree Programmes in Nigerian Universities. A paper presented at the 2nd Annual International Conference for the scholarship of teaching and learning held at Georgia Southern University, Stateboro, Georgia, USA.
24. Pintrich, P. K. (2005). Multiple goals, multiple pathways: The roller role goal orientation in learning and achievement. *Journal of Educational Psychology*, *92*, 544-555.
25. Pulkka, A. & Niemivirta, M. (2013) Predictive relationships between Adult Students' achievement goals orientations, course evaluations and performance. *International Journal of Educational Research, 61*, 26-37. http//doi: 10.1016/j.ijer.2013.03.015
26. Senko, C., Hana, H. & Belmonte, K. (2013). Achievement goals, study strategies, and achievement: A Test of the learning agenda framework, *Learning and Individual Differences*, *24*, 1-10.
27. Tao, V. & Hong, Y. Y. (2000). A meaning system approach to Chinese Students' achievement goals. *Journal of Psychology in Chinese Societies*, *1*(2), 13-38.
28. Vrugt, A. & Oort, F. J. (2008). Metacognition, achievement goals, study strategies and academic achievement: pathways to achievement, *Metacognition Learning, 30*, 123-146. http://doi:10.1007/s11409-008-9022-4
29. Weissgerber, S. Reinhard, M. A., & Schindler, S. (2016) Study harder? The relationship of achievement goals to attitudes and self-reported use of desirable difficulties in self-regulated learning. *Journal of Psychological and Educational Research*, *24*(1), 42-60.
30. Wolters, C.A. (2004). Advancing achievement goal theory: Using goals structures and goal orientations to predict Student's motivation, cognition and achievement. *Journal of Educational Psychology*, *96*, 236-250. http;//doi:10.1037/0022-0663.96.2.236

31. Yip, M. C. W. (2007). Differences in learning and study strategies between high and low achievement University Students, *Educational Psychology*, *27*, 597-606.