ADULT LEARNERS' PREFERENCES IN INSTITUTIONS OF HIGHER LEARNING: A CASE OF AFRICA INTERNATIONAL UNIVERSITY (AIU), KENYA

Francisca Wavinya Ngala
Quality Assurance Officer/Assistant Lecturer, Education Department
Africa International University
Box 24686 - 00502, Karen, Nairobi

ABSTRACT: *The adult learner emerges in the education system as a new breed of learner that the traditional education system had not anticipated. This poses challenges to the traditional education system as student preferences of various learning styles may shift depending on the learning situation. This paper is a call for lecturers in institutions of higher learning to develop teaching strategies that match the learning preferences of post-graduate students for enhanced learning. Descriptive survey design which used the cross-sectional approach to data collection was adopted. The population constituted all the 397 post-graduate students at Africa International University out of which a sample of 199 participants from the post-graduate Diploma, Masters' level and Doctoral programmes was obtained. Data collection was done using a questionnaire guide and analysed by Statistical Package for Social Sciences (SPSS). A modified version of the Grasha-Riechmann Student Learning Style Scales (GRSLSS) was used to measure the learning preferences. The findings revealed that majority of the students preferred participant, both independent and dependent and collaborative learning. Learning preferences vary according to the learning situation and the teachers' style. The paper recommends exposure to various learning strategies by lecturers.*

KEYWORDS: Adult Learning, Post-graduate, Learner Preferences, GRSLSS.

INTRODUCTION

The training experience of teachers has not prepared them as may require for one to engage in teaching of post-graduate students. Vella (1995) asserted that most educators recognize that they teach in the same way as they were taught. Unless their training provides them with a new experience of education, as teachers they will revert to their known framework, their familiar model. The implication is that lecturers need to be specifically trained to handle adult learners, as their earlier training had not considered adult learners as unique and in need of different pedagogical strategies. In most cases, if the lecturers were not treated as adults by their trainers they may also not treat their students as adults.

This inquiry was birthed by Brookfield's (1986) observation that we should be careful about generalization of studies on adult learning derived from white Americans when we know so little about learning styles of other races such as Asians and Africans and bearing in mindthat learning takes place in context. The study also expounded on the findings by Bowen (1984) and Buconyori (1991) on the learning styles of African students.

LITERATURE UNDERPINNING

Learning Preferences

Keefe (1979) defines learning styles as characteristic cognitive, affective and physiological behaviours that serve as the relatively stable indicators of how learners perceive, interact with and respond to the environment. This definition suggests that the learning style is a broader concept which not only includes cognitive styles but also includes affective and physiological styles. It is therefore a major misconception to use cognitive style as a synonym for learning styles since it covers only one aspect of learning style. Messick (1979) defines cognitive style as information processing habits presenting the learner's typical mode of perceiving, thinking, problem solving and remembering. This definition excludes other aspects of learning style namely affective and physiological which are crucial as the three domains are necessary in any learning process. From the above definitions, cognitive styles and learning styles are not synonymous and should not be used as such.

Interest in learning preferences "grew out of humanistic psychology and learning theory which places greatest emphasis on leaner as a person" (Yount, 1999, p.176). This is in recognition of individual differences in the learners which is a very important aspect in learning. It should be acknowledged that the learners are unique and this influences the ways they prefer to learn. An understanding of how learners prefer to learn in turn may influence how the instructors design courses and instructional methods to match the preferences of their learners. Research has shown that matching student's learning preferences with the teaching preferences improves performance. Learning preferences of students come to mind whenever there is a discussion on individual differences among students. To realize that students are unique even in the ways they prefer to learn is a major step towards improving instructional practice. Learning preferences of university students need to be identified so as to provide teaching strategies that match those preferences for improved performance (Claxton & Murrel, 1987).

The Grasha -Riechmann learning style which uses the Grasha-Riechmann Student Learning Styles Scale (GRSLSS) to determine learning preferences was used. This instrument is more appropriate as it was specifically developed for adult learners though in a different context and culture from the present study context. What determines how adult students prefer to learn is the question, thus this paper establishes some of the factors that influence the student preferences of the style of learning.

METHODOLOGY

Africa International University was the institution of focus. All 397 post-graduate students enrolled in three post-graduate level (Doctoral, Masters and Post-graduate Diploma) programmes. The students were enrolled in two broad academic disciplines classified as Humanities and Social Sciences and Professional and Applied Sciences. The population entailed both male and female students in their young and middle adulthood. Samples of students from all post-graduate programmes at the university were drawn using stratified and systematic random sampling.

Nachmias and Nachmias (1996, p. 188) and Mugenda and Mugenda (2003, p. 49) observe that stratified sampling produces more inclusive samples as they incorporate subgroups of small populations which would have been completely left out if other sampling methods were used. Within each stratum, systematic random sampling was done to obtain a random sample. A random sample implies that each person in the target population had an equal chance of being selected. Systematic random sampling was done by first dividing the total population of each programme by the sample sizes obtained for the programmes. A sample size of 50 percent of the target population was used. Questionnaires were used to collect data. .

The factors which formed the independent variables included: age, gender and the academic discipline of the learners. The learning preferences were the dependent variables and they included: dependent/independent, avoidant/participant, and competitive/collaborative learning preferences. The Likert scale which asks for the extent of agreement with an item was used in the questionnaire. The scales were planned on a 5-point scale with responses ranging from strongly disagree to strongly agree (Gall *et al.,* 2003, p. 229; Nachmias & Nachmias 1996, P. 114). On the five-point Likert scale provided, participants were expected to choose from five attitude responses ranging from extremely negative (strongly disagree) to extremely positive (strongly agree). In three dimensions, the first set of questions investigated the dependent/independent mode of the GRSLSS, the second section was designed to investigate the avoidant/participant dimensions of the GRSLSS and the third was designed to investigate the competitive/collaborative dimensions of the GRSLSS. The benchmarks for deciding the learning preferences of the respondents were set on these three dimensions. This was because the questionnaire was designed in such a way that a very strong independent, participant and collaborative respondent was likely to choose strongly agree which was rated 5.The Likert scale was appropriate for this study as it was measuring attitude in terms of learning preferences.
The Statistical Package for Social Sciences (SPSS) was used to analyze the data and regression techniques were used for correlation to establish relationships and the magnitude of those relationships.

RESULTS AND DISCUSSION

The Academic Programmes

To identify the academic disciplines of the student participants, table 1 below depicts the responses. Majority (73.5%) of the respondents belonged to the Humanities and Social Sciences. This was probably due to the fact that the majority of post-graduate students in the university take religion-related courses. Professional and Applied Sciences category was represented by 26.5% of the respondents. The Natural and Formal Science category was unsurprisingly not represented because such courses were not offered at the university. Table 1 gives a summary of the academic discipline representation.

Table 1: Respondents' academic discipline

Academic discipline	Frequency	Percent	Valid Percent
Humanities and Social Sciences	122	72.2	73.5
Professional and Applied Sciences	44	26.0	26.5
Natural and Formal Sciences	0	0	0
Total	**166**	**98.2**	**100.0**
No response	3	1.8	
Total	**169**	**100.0**	

The Humanities and Social Sciences academic discipline is the most popular programme among the post-graduate students. Further multivariate analysis was done on different factors to establish the students' preferences based on dependent/independent, avoidant/participant, and competitive/collaborative learning style preferences. The key below is for the various abbreviations adopted by the author.

Key

YAMH&S-Young adult males of Humanities and Social Sciences
YAFH&S- Young adult females of Humanities and Social Sciences
MAMH&S- Middle-aged males of Humanities and Social Sciences
MAFH&S- Middle-aged females of Humanities and Social Sciences
YAMP&A-Young adult males of Professional and Applied Sciences
YAFP&A- Young adult females of Professional and Applied Sciences
MAMP&A-Middle-aged males of Professional and Applied Sciences
MAFP&A- Middle-aged females of Professional and Applied Sciences

Independent/ dependent Dimension

Preference to work alone

Table 2: Multiple variables and preference to work alone

	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	20	25.4%	-	0%	59	74.6%	79	100%
YAFH&S	15	36.6%	-	0%	26	63.4%	41	100%
MAMH&S	1	50%	-	0%	1	50%	2	100%
MAFH&S	-	0%	-	0%	-	0%	-	-
YAMP&A	6	30%	1	5%	13	65%	20	100%
YAFP&A	3	18.8%	0	0%	13	81.2%	16	100%
MAMP&A	0	0%	-	0%	5	100%	5	100%
MAFP&A	0	0%	-	0%	1	100%	1	100%
Discarded							5	
Total	**45**		**1**		**118**		**169**	

R=.125 R^2=.016   critical value =.497   df =14   Confidence level = 0.05

Table 2 is a multivariate analysis on preferences of work alone out of which, majority of young adult males and females were likely to prefer independent learning, in doing assignments. Young adult males of Humanities and Social Sciences represented 74.6% while 63.4% represented females of the same category who agreed with the assertion that they prefer to work alone. The middle-aged males of Humanities and Social Sciences were likely to be distributed equally between independent and dependent learning preferences in doing assignments. They were represented by 50% agreement and 50% disagreement with the assertion.

Majority (65%) males and (81.2%) females of the young adults in the Professional and Applied Sciences discipline were likely to prefer independent learning, in doing assignments. The middle-aged adults (100%) males and 100%, for the only female respectively in this discipline most likely preferred independent learning. In testing the hypothesis, the statistical analysis revealed an R value of .125, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .016, which implies that all the variables combined can explain only 1.6% of the variance in preference to work alone, which is a negligible relationship. The hypotheses were not rejected but rather affirmed that there is no difference, statistically between the combined variables and preference to study alone.

Confidence to learn without assistance

Table 3: Multiple variables and confidence to learn without assistance

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	26	33.4%	1	1.3%	51	65.4%	78	100%
YAFH&S	15	36.6%	0	-	26	63.4%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	4	19%	-	-	17	81%	21	100%
YAFP&A	3	18.7%	-	-	13	81.3%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							5	
Total	49		1		84		169	

R=.209 R^2=.044   critical value =.497   df =14   Confidence level = 0.05

Table 3 indicates that majority (65.4% and 63.4%) of young adult males and females respectively in the Humanities and Social Sciences were likely to prefer independent learning, in relation to confidence in learning. They showed confidence about their ability to learn on their own. The middle-aged males of Humanities and Social Sciences were likely to be distributed equally between dependent and independent learning preferences, in relation to confidence in learning. They were represented by 50% disagreement and 50% agreement with the assertion.

In the Professional and Applied Sciences, majority (81% and 81.3%) of young adult males and females respectively were likely to prefer independent learning, in relation to confidence in learning. The middle-aged adults in the Professional and Applied Sciences were found to prefer

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independent learning, in relation to confidence in learning. They were represented by 100% agreement with the assertion for all the males and the only female.

The statistical analysis revealed an R value of .209, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .044, which implies that all the variables combined can explain only 4.4% of the variance in confidence in learning alone, which is a negligible relationship. The author therefore did not reject all the hypotheses but rather affirmed that there was no difference, statistically, between the combined variables and confidence in learning.

Developing own ideas about course content

Table 4: Multiple variables and developing own ideas about course content

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	27	35%	4	5.2%	46	59.8%	77	100%
YAFH&S	15	36.6%	6	14.6%	20	48.8%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	100%
YAMP&A	6	28.5%	0	0%	15	71.5%	21	100%
YAFP&A	1	6.3%	2	12.5%	3	81.2%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							6	
Total	50		12		101		169	

R=.279 R^2=.078   critical value =.497   df =14   Confidence level = 0.05

Table 4 reveals that in the Humanities and Social Sciences, 59.8% of young adult males were likely to prefer independent learning, in relation to developing own ideas about a course, as they affirmed the assertion that they like to develop their own ideas about course content. The middle -aged males of Humanities and Social Sciences were likely to be distributed equally between dependent and independent learning preferences, in relation to developing own ideas about a course. They were represented by 50% disagreement and 50% agreement with the assertion.

In the Professional and Applied Sciences 71.5% of young adult males and 81.2% of young adult females were likely to prefer independent learning, in relation to developing own ideas about a course. This was shown by their agreement with the statement that they like to develop own ideas about course content. The middle-aged adults in this discipline were all likely to prefer independent learning, in relation to developing own ideas about a course, as demonstrated by 100% agreement with the assertion that they like to develop own ideas about course content for all the males and the only female.

The statistical analysis revealed an R value of .279, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .078, which implies that all the variables combined can explain only 7.8 % of the variance in developing own ideas about course content, which is a negligible relationship. The

author therefore did not reject all the hypotheses but rather affirmed that there was no difference, statistically, between the combined variables and developing own ideas about course content.

Non-reliance on teachers to tell what is important

Table 5: Multiple variables and non-reliance on teachers to tell me what is important to learn

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	43	54.5%	2	2.5%	34	43%	79	100%
YAFH&S	20	48.8%	1	2.4%	20	48.8%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	100%
YAMP&A	11	52.3%	-	-	10	47.6%	21	100%
YAFP&A	5	31.2%	-	-	11	68.7%	16	100%
MAMP&A	-	-	-	-	5	100%	-	100%
MAFP&A	1	100%	-	-	-	-	1	100%
Discarded							4	
Total	81		3		81		165	

R=.202 R^2=.041   critical value =.497   df =14   Confidence level = 0.05

Table 5 indicates that young adult males of Humanities and Social Sciences were likely to prefer dependent learning, with reference to non-reliance on teachers to tell what is important. This is depicted by 54.5% disagreement with the assertion that they did not rely on teachers to tell them what is important for them to learn. The middle age males of Humanities and Social Sciences were likely to be distributed equally between dependent and independent learning preferences, with reference to non-reliance on teachers to tell what is important. They were represented by 50% disagreement and 50% agreement with the assertion.

In the Professional and Applied Sciences the young adult males were likely to prefer dependent learning as shown by shown by 52.3% disagreement with the assertion. 68.7% of females in this category agreed with the assertion, which suggested likely independent preferences. All the middle-aged males in Professional and Applied Sciences were likely to prefer independent learning, with reference to non-reliance on teachers to tell what is important, as demonstrated by 100% agreement with the assertion. On the other hand the only middle-aged female was likely to prefer dependent learning, with reference to non-reliance on teachers to tell what is important, as shown by 100% disagreement with the assertion.

The statistical analysis revealed an R value of .202, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .041, which implies that all the variables combined can explain only 4.1% of the variance in non-reliance on teachers to tell them what is important, which is a negligible relationship. The author therefore did not reject all the hypotheses but rather affirmed that there was no difference, statistically, between the combined variables and non-reliance on teachers to tell what is important.

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Participant/ Avoidant Dimension

Participation in all aspects of the course

Table 6Multivariate analysis: Multiple variables and participating in all aspects of a course

Variables	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	3	3.8%	1	1.3%	75	94.9%	79	100%
YAFH&S	4	9.7%	-	-	37	90.5%	41	100%
MAMH&S	-	-	-	-	1	100%	1	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	2	9.6%	-	-	19	90.4%	21	100%
YAFP&A	3	18.7%	1	6.3%	12	75%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							5	
Total	12		2		150		169	

R=.138 R^2=.019   critical value =.497   df =14   Confidence level = 0.05

The multivariate analysis in relation to participating in all aspects of a course as seen in Table 6 revealed no significant differences between the young adult males and females of Humanities and Social Sciences. Majority (94.9% and 90.3%) of males and females respectively were likely to prefer participant learning, in relation to participating in all aspects of a course. This was suggested by males and females in this category, who responded favourably with the assertion that they participate in all aspects of a course.

The middle-aged adult males (100%) in Humanities and Social Sciences were likely to prefer participant learning in relation to participating in all aspects of a course. In the Professional and Applied Sciences, majority (90.4% and 75%) of young adult males and females respectively were likely to prefer participant learning, in relation to participating in all aspects of a course. The middle-aged (100%) adults in the Professional and Applied Science discipline were overwhelmingly likely to prefer participant learning, in relation to participating in all aspects of a course.

The statistical analysis revealed an R value of .138, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .019, which implies that all the variables combined can explain only 1.9% of the variance in participating in all aspects of a course, which is a negligible relationship. There was no significant difference, statistically, between the combined variables and participating in all aspects of a course.

Table 7 Multivariate analysis: Multiple variables and positive attitude to attendance of class sessions

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	5	6.3%	0	0%	74	93.7%	79	100%
YAFH&S	4	9.8%	1	2.4%	36	87.8%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	3	14.3%	-	-	18	85.7%	21	100%
YAFP&A	5	31.3%	-	-	11	68.7%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							4	
Total	18		1		146		169	

R=.185 R^2=.034   critical value =.497   df =14   Confidence level = 0.05

In relation to positive attitude to attendance of class sessions, it was found out thattheyoung adult males and females were likely to prefer participant learning. This is demonstrated by 93.2% and 87.8% of young adult males and females respectively who agreed with the assertion that class sessions are worth attending. The middle-aged adult males were likely to be equally distributed between participant and avoidant learning preferences depicting a 50% agreement and 50% disagreement. In Professional and Applied Sciences the young adult males and females showing 85.7% and 68.7% respectively were likely to prefer participant learning. All (100%) middle-age adults in the Professional and Applied Sciences were in agreement with the assertion.

The statistical analysis revealed an R value of .185, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .034, which implies that all the variables combined can explain only 3.4% of the variance in positive attitude to attendance of class sessions, which is a negligible relationship.

Table 8: Multivariate analysis: Multiple variables and preference to study for tests with other students

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	19	24.1%	2	2.5%	58	73.4%	79	100%
YAFH&S	6	15.8%	2	5.3%	30	78.9%	38	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	4	19%	1	4.8%	16	76.2%	21	100%
YAFP&A	8	50%	-	-	8	50%	16	100%
MAMP&A	3	60%	-	-	2	40%	5	100 %
MAFP&A		-	-	-	1	100%	1	100%
Discarded							7	
Total	41		5		116		169	

R=.219 R^2=.048   critical value =.497   df =14   Confidence level = 0.05

Table 8 shows that majority (73.4% and 78.9%) of young adult males and females respectively in the Humanities and Social Sciences were likely to prefer participant learning with reference to studying for tests with other students. The middle-aged adult males were likely to be equally distributed between participant and avoidant learning preferences, with reference to studying for tests with other students. 50% of the respondents in this category agreed and 50% disagreed with the statement. In Professional and Applied Sciences the young adult males were likely to prefer participant learning, with reference to studying for tests with other students. 76.2% of young adult males agreed with the assertion. The middle-aged adult males of Professional and Applied Sciences were likely to prefer avoidant learning, as 60% did not affirm the assertion. The only middle-aged adult female of Professional and Applied Sciences was likely to prefer participant learning with reference to studying for tests with other students, as she affirmed the assertion.

The statistical analysis revealed an R value of .219, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .048, which implies that all the variables combined can explain only 4.8% of the variance in studying for tests with other students, which is a negligible relationship. It was thus affirmed that there was no difference, statistically, between the combined variables and studying for tests with other students.

Table 9: Multivariate analysis: Multiple variables and not finding it difficult to pay attention

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	5	6.3%	2	2.5%	72	91.2%	79	100%
YAFH&S	4	9.8%	3	7.3%	34	82.9%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	3	14.3%	-	-	18	85.7%	21	100%
YAFP&A	4	25%	-	-	12	75%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							4	
Total	17		5		143		169	

R=.161 R^2=.026   critical value =.497   df =14   Confidence level = 0.05

The multivariate analysis in relation to not finding it difficult to pay attention, as reported in Table9, revealed that the majority of young adult males and females in Humanities and Social Sciences were likely to prefer participant learning, with reference to not finding it difficult to pay attention as represented by 91.2% and 82.9% males and females respectively. The middle-aged adult males were likely to be equally distributed between participant and avoidant learning preferences, with reference to not finding it difficult to pay attention. 50% of the respondents in this category agreed and 50% disagreed with the statement.

In the Professional and Applied Sciences, the young adult most (85.7% and 75%) males and females were likely to prefer participant learning with reference to not finding it difficult to pay

attention. All (100%) middle-age adults in the Professional and Applied Sciences were likely to prefer participant learning, with reference to not finding it difficult to pay attention.

The statistical analysis revealed an R value of .161, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .026, which implies that all the variables combined can explain only 2.6% of the variance in not finding it difficult to pay attention, which is a negligible relationship.

Collaborative/ Competitive Dimension

Table 10:Multivariate analysis: Multiple variables and willingness to help other students

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	3	4.1%	-	-	70	95.9%	73	100%
YAFH&S	2	4.9%	-	-	39	95.1%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	1	4.8%	-	-	20	95.2%	21	100%
YAFP&A	2	12.5%	-	-	14	87.4%	16	100%
MAMP&S	-	-	-	-	5	100%	5	100%
MAFP&S	-	-	-	-	1	100%	1	100%
Discarded							10	
Total	9				150		169	

R=.066 R^2=.004   critical value =.497   df =14   Confidence level = 0.05

According to Table 10it was found that majority (95.9% and 95.1%) of young adult males and females respectively in Humanities and Social Sciences were likely to prefer collaborative learning, with reference willingness to help other students. The middle-aged males were equally distributed between likely collaborative and likely competitive learning preferences, with reference willingness to help other students showing 50% agreement and 50% disagreement with the assertion.

In Professional and Applied Sciences, the majority (95.2% and 87.4%) of young adult males and females respectively were likely to prefer collaborative learning. All (100%) middle-aged males and the only female in Professional and Applied Sciences were likely to prefer collaborative learning, with reference willingness to help other students.

The analysis revealed an R value of .066, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .004, which implies that all the variables combined can explain only 0.4% of the variance in willingness to help other students, which is a negligible relationship.

Table 11: Multivariate analysis: Discipline and team learning in class sessions

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	4	5.1%	-	-	74	94.9%	78	100%
YAFH&S	4	9.7%	-	-	37	90.3%	41	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&S	-	-	-	-	21	100%	21	100%
YAFP&S	2	12.4%	1	6.2%	14	87.4%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							5	
Total	11				153		169	

R=.062 R^2=.004   critical value =.497   df =14   Confidence level = 0.05

Table 11 in relation to team learning in class sessions, shows majority (94.9% and 90.3%) of young adult males and females respectively in Humanities and Social Sciences being likely to prefer collaborative learning, with reference to team learning. of young adult males and females, respectively agreed with the assertion that class sessions help them feel like part of a team, where people help each other to learn. The middle-aged males were equally distributed between likely collaborative and likely competitive learning preferences, with reference to team learning. 50% of the respondents agreed and 50% disagreed with the assertion.

In the Professional and Applied Sciences, majority (100% and 87.4%) of the males and females respectively were likely to prefer collaborative learning, with reference to team learning. All (100%) the middle-aged males and the only female in the Professional and Applied Sciences were likely to prefer collaborative learning, with reference to team learning.

The statistical analysis revealed an R value of .062, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .004, which implies that all the variables combined can explain only 0.4% of the variance in team learning in class sessions, which is a negligible relationship.

Table 12: Multivariate analysis: Multiple variables and sharing ideas with each other

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	2	2.6%	-	-	76	97.4%	78	100%
YAFH&S	3	7.5%	-	-	37	93.5%	40	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	-
YAMP&A	0	-	-	-	21	100%	21	100%
YAFP&S	2	12.5%	-	-	14	87.5%	16	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&S	-	-	-	-	1	100%	1	100%
Discarded							6	
Total	8				155		169	

R=.158 R^2=.025   critical value =.497   df =14   Confidence level = 0.05

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According to Table12, which reports on multiple variables and sharing ideas with each other, it was found that majority (97.4% and 93.5%) of young adult males and females in Humanities and Social Sciences were likely to prefer collaborative learning, with reference to sharing ideas with each other. of young adult males and females, respectively agreed with the assertion that students should be encouraged to share their ideas with each other.

The middle-aged males were equally distributed between likely collaborative and likely competitive learning preferences, with reference to sharing ideas with each other. 50% of the respondents agreed and 50% disagreed with the assertion. In the Professional and Applied Sciences the majority (100% and 87.5%) of the young adult males and females respectively were likely to prefer collaborative learning. All (100%) middle-aged adults of Professional and Applied Sciences were likely to prefer collaborative learning, with reference to sharing ideas with each other.

The statistical analysis revealed an R value of .158, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .025, which implies that all the variables combined can explain only 2.5 % of the variance in sharing ideas with each other, which is a negligible relationship.

Table13: .Multivariate analysis: Multiple variables and dislike for competition with other students

Variable	Disagree		Undecided		Agree		Total	
	Count		Count		Count		Count	
YAMH&S	39	50%	2	2.6%	37	47.4%	78	100%
YAFH&S	27	69.2%	2	5.1%	10	25.7%	39	100%
MAMH&S	1	50%	-	-	1	50%	2	100%
MAFH&S	-	-	-	-	-	-	-	100%
YAMP&A	7	35%	1	5%	12	60%	20	100%
YAFP&A	5	33.4%	1	6.6%	9	60%	15	100%
MAMP&A	-	-	-	-	5	100%	5	100%
MAFP&A	-	-	-	-	1	100%	1	100%
Discarded							9	
Total	79		6		75		169	

R=.350 R^2=.122   critical value =.497   df =14   Confidence level = 0.05

Table 13, in relation to multiple variables and dislike for competition with other students, revealed that majority of young adult females in Humanities and Social Sciences were likely to prefer competitive learning, with reference to dislike for competition. 69.2% of the females disagreed with the assertion that they did not like competing with other students for good grades. The middle-aged males were likely to be equally distributed between likely collaborative and likely competitive learning preferences with reference to dislike for competition depicting a 50% agreement and 50% disagreement.

In Professional and Applied Sciences the majority of young adult males and females were likely to prefer collaborative learning, with reference to dislike for competition. 60% of both young

adult males and females agreed with the assertion. The middle-age males and female in Professional and Applied Sciences were likely to prefer collaborative learning, with reference to dislike for competition, as demonstrated by 100% agreement with the assertion.

The analysis revealed an R value of .350, which was smaller than the critical value of .497 at 14 df required to reject the hypotheses of no relationship. The analysis also gave an R^2 value of .122, which implies that all the variables combined can explain 12.2% of the variance in dislike for competition with other students, which is not a strong relationship.

IMPLICATION TO RESEARCH AND PRACTICE

The unique learning requirements for adult learners are essentially a policy issue for colleges and universities. As institutions of higher learning modify their existing programs and services geared for adult learners, they must also develop strategies that will advance understanding in regard to the adult learner by the administrative and instructional staff. This paper identifies the adult learner preferences in institutions of higher learning. Therefore, institutions of higher learning will consider based on these findings to develop a critically reflective staff and instructors who show a willingness to modify existing programs and develop new practices geared to their adult populations.

CONCLUSION

The respondents predominantly preferred participative learning in the participant /avoidant category with a few cases of preference for avoidant learning for this category. In the independent/dependent category, the students showed preference for both independent and dependent learning in an equal proportion. The classroom is treasured by most students as that is where they interact with the authorities and colleagues, to enjoy teamwork and group activities. Although not by a big margin, the collaborative preference recorded majority responses in the collaborative/competitive category. The inability to decide on learning preferences by some of the respondents was noted. This indicated that the respondents either did not find the questions clear enough or may have lacked self-awareness in relation to learning preferences. Preferences for particular styles show that people are different and that different learning situations may call for particular styles necessitating a switch in style, depending on the structure of the lesson, the method or content. This does not suggest in any way that that some styles are better than others. Results displayed a lot of switching between styles for the independent /dependent and collaborative/competitive learning preferences among the post-graduate students.

Post-graduate students in institutions of higher learning (Africa International University) were likely to prefer participant, both independent and dependent and collaborative learning. It was found out that there was switching between the styles, and inferences were made that this depended on the learning situation for independence/dependent and the collaborative/competitive dimensions. This indicates that learning preferences' are not permanent but may change according to the learning situation. This is supported by Grasha's (1972) assertion that students prefer all the six styles to some degree, but the styles are not adopted exclusively but they vary in

strengths of preference for the styles. He also found out that the preferred styles vary according to how a teacher has structured the class. That is to say that the teaching methods, content and assignments influence the learning preference.

RECOMMENDATIONS

1. Post-graduate students may be inclined to participative, both independent and dependent and collaborative learning preferences and therefore teaching strategies, such as group discussion, class participation, class assignments, class presentations, individual assignments, guided projects and lectures may be encouraged.
2. The number of respondents who preferred participant learning shows the value attached to the traditional classroom. As the world moves to newer modes of learning such as E-learning, a lot of effort will be required to change the mind-set of the learners who are more comfortable in the classroom.
3. There is need to sensitize learners about developing self-awareness as far as learning strategies are concerned. This follows evidence of a small fraction of learners who either did not understand some questions or were totally unaware of their learning preferences,
4. Since learning styles are not permanent predispositions, learners should not be labelled or stereotyped but should be exposed to various learning strategies as their preferences will shift based on the particular learning situation.

Future Research

This paper identifies various learner preferences. Future studies should be done to investigate the design and development of instructional strategies to meet the diverse learning styles and needs of adult learners.

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