**Exploring the Impact of Cognitive Styles on Academic Program Satisfaction: A Case Study of Undergraduate Students at Pwani University, Kilifi.**

***Abstract***

*Investigating undergraduate students' level of satisfaction with academic programs was the goal of this study. The investigation was guided by the Field Dependence-Field Independence concept proposed by Witkin. Correlational research methodology was employed. Students' cognitive style and program satisfaction (CS&PS) survey was used to collect data. Study participants included 1,926 first-year undergraduates and 1,671 third-year undergraduates. The study created a sample size of 351 using the Krejcie and Morgan Sampling table. Proportionate sampling was used to choose the respondents in order to represent departments, schools, and genders. Student questionnaire on cognitive style and program satisfaction (CS&PS) and Wyss's (2002) Field Dependence Cognitive Style Checklist was used. The test-retest method was used to improve the tool's validity and reliability. The Cronbach's alpha coefficient was computed to evaluate the piloted surveys' reliability. To ensure the content validity of the study instruments, expert evaluation and pilot research were employed. For regression analysis, chi-square analysis, and Pearson correlation, the Statistical Package for Social Sciences (SPSS) was utilized. As to the study, 54.9% of participants were Field Independent (FI) learners, whereas 44.8% of participants were Field Dependent (FD) learners. Furthermore, female students had a higher prevalence of FD cognitive style (69.5%), but male students had a higher prevalence of FI cognitive type (74.8%). 78.3% of students were satisfied with their course of study, compared to 21.7% who weren't, according to the report. According to the survey, in order to improve undergraduate students' performance through academic mentorship programs, the administration of Pwani University should encourage them to identify their cognitive types and learning styles. The study also proposes that lecturers employ a variety of teaching methods and materials to try to meet each learner's chosen cognitive type during the learning process.*

***Keywords: Academic programme, Cognitive style, Programme satisfaction, Cronbach’s alpha coefficient, Field Dependent***

1. **INTRODUCTION**

Plans and ambitions for future careers are often present when undergraduate students begin their studies. Many students, however, are compelled to enroll in programs they do not wish to be in due to university placement, peer pressure, or family pressure. Despite the fact that the recent increase in university enrollment in Kenya has been hailed as a good thing, many accepted students complain about their academic programs (Palmer, 2003). The extent to which a study plan meets a learner's expectations based on their whole program experience is known as academic program satisfaction, according to Serenko (2011). What defines a student's degree of satisfaction with a program is the difference between their initial expectations and their actual experience after enrolling. The difference between a learner's expectations and their actual program experience is what O'Neill and Palmer (2003) define as program 5 satisfaction. Their definition and this one are compatible. Thus, satisfaction is achieved when the classroom experience meets or exceeds the program expectations of the pupils. On the other hand, disappointment results when program expectations and reality diverge negatively. Program satisfaction at the university level boosts future career aspirations, work satisfaction, personal happiness, and professional achievements (Sharf, 2010). Program satisfaction is influenced by both psychological and societal aspects, according to Sharf (2010).

Age-related variations in program satisfaction also occur when an individual's perception of their profession choice becomes more realistic. As one becomes more conscious of various limitations, such as one's cognitive capacity, social standing, and the quantity of open positions, they learn to balance their ideal option with practical demands. Academically satisfied students will therefore perform better, have higher career aspirations in their field of study, be more dedicated to program activities, and be less inclined to discontinue or put off their studies. McLeay, Robson, and Yusoff (2017) state that academic happiness is another element that researchers highlight as a competitive advantage for universities. In addition to being more motivated and committed to their studies, students who are satisfied with their academic achievement are also more likely to recommend the university to their friends, which expands its student body (McLeay et al., 2017).

Weerasinghe and Fernando (2017) also note that academic program evaluation and learner loyalty to their program of study are favorably connected. Wong and Chapman (2023) corroborate this, noting that students who are happy with their academic programs are more committed to and enthusiastic about them.Students who are satisfied with their academic achievement are more inclined to put in more effort by attending classes regularly and taking part in program activities than those who are not, claim Tessema, Ready, and Yu (2012). Tessema et al. (2012) found that academically happy students had a greater retention rate than unsatisfied students. The study also discovered that when there is dissatisfaction, there is a high probability of student deferment and dropout. Additionally, studies reveal that pupils who are satisfied with their academic path perform better academically. For instance, pupils who are intellectually happy do better than those who are not in their study programs, according to Dhaqane and Afrah (2016).

Gopal, Singh, and Aggarwal (2021) agree, writing that happy students perform better in school and have aspirations for their future careers. Muhammad, Daniel, and Abdurauf (2015) discovered a strong correlation between students' academic success and their Field Independence–Field Dependence cognitive style, and that students' academic success was predicted by their Field Dependence and Field Independence (FI-FD) cognitive style. Numerous studies have demonstrated that program satisfaction arises when a student's cognitive type and course of study match. This is evident in positive performance, career objectives, program loyalty, and high university student retention.

For instance, a seminal 1977 study by Witkin et al. discovered that college students performed best in courses that suited their cognitive style. The study also discovered that learners were content when their study programs and their FI-FD cognitive styles matched; when they didn't, they became unsatisfied and began studying in other subjects, postponing, or quitting. According to a study by Wong and Chapman (2023), program satisfaction arises from a fit between a learner's study plan and cognitive type. Additionally, studies have documented the satisfaction and dissatisfaction of undergraduate students with their academic program. Wong and Chapman (2023) performed a survey on learner satisfaction and found that only 76.36% of undergraduate students in Singapore's 280-degree programs were happy with their courses of study.

Globally, The Africa-America Institute (2015) reports that 26% of people worldwide are enrolled in college. Only 13% of employees are actively and psychologically engaged in their work, whereas 63% of workers are disengaged, per a global workplace evaluation survey conducted by Crabtree (2013). These numbers show that the majority of employees are not happy with the training they received, are not motivated enough, and can easily negatively affect their colleagues. 40% of Americans with a degree say they regret their previous employment decision and would choose a different field of study if given the option, according to a 2017 Strada Education Network survey. A study by Pollard, Pearson, and Willison (2004) revealed that 52% of UK undergraduate students were unsatisfied with their undergraduate program, and 59% were unhappy with the programs they were assigned to.

A survey by Ahmed, Sharif, and Ahmad (2017) among Pakistani degree students revealed that most undergraduates were dissatisfied with their academic path. Additionally, the study demonstrated that a lack of excitement for the career and a mismatch between personality and profession choice were the main causes of student attrition, career failure, and low output. This demonstrates that many professionals are indeed dissatisfied with their work. Africa as a whole is in the same predicament in Sub-Saharan Africa. 68.1% of South African employees said they were stressed out and disengaged from their professions, according to a poll by Volmink (2014). Likewise, Onyekuru (2015) examined the influence of FI-FD on the job choices of secondary school students in Nigeria and found a high relationship between the students' FI-FD cognitive style and their career choices. According to a comparable study on factors impacting career choice and satisfaction among South African undergraduate students, students' ability to identify their preferred program, teachers, and family had a significant impact on program choice (Shumba & Naong,). Career choices are significant choices that affect a person's identity, values, and objectives. In South Africa, a study of final-year undergraduate students revealed that making a mistake on this choice costs them money, time, and job satisfaction (Barendse, 2015).

Koech, Bitok, Rutto, Koech, Okoth, Korir, and Ngala (2016) investigated the factors affecting undergraduate students' profession choices in Kenyan public universities. The authors claim that a variety of factors, including gender, peer pressure, employment opportunities, parental preferences, and personal interests, influence students' career choices. Interestingly, 78% of respondents said they would change their line of study, according to the survey. The institution is having trouble matching students' skills with their career goals, according to the survey. According to Gacohi, Sindabi, and Chepchieng's (2017) follow-up study of degree-seeking students at six public universities in Kenya, a person's career is essential to their existence, which is in agreement with Koech et al. (2016). Students are increasingly enrolling in both public and private universities. According to data from Kenya Universities and Colleges Central Placement Services (KUCCPS), more students are enrolled in degree programs. In the 2014–2015 academic year, for example, 79,313 students were enrolled in Kenyan public universities. This number increased to 84,389 in 2016–2017 and 89,486 in 2019–2020, respectively.

Choosing a university degree program is one of the most significant professional decisions, according to the survey. It also serves as the main career turning point for students since it signifies the beginning of workplace readiness. A student's life opportunities are also opened and closed by it. Gacohi et al. (2017) claim that if this career goal is not accomplished, a person will grow unhappy and struggle to handle future jobs. According to the study, undergraduate students' career success was largely dependent on their capacity to access career information. Moreover, Getange and Sagwe (2016) note that the main reasons why students make poor program selections are a shortage of experienced teachers to oversee career counseling and a lack of high school career counseling regarding careers based on students' aptitudes. Furthermore, students are rarely given the programs they first select and are usually left to select their own, as Getange and Sagwe (2016) note. Since it leads to dissatisfaction, which affects the person even at work, this is a harmful tactic. Therefore, student satisfaction with the curriculum should be considered an important learning goal. According to Qureshi and Mian (2010), satisfying student needs is crucial to creating a supportive learning environment, a favorable reputation for the school, financial success, and devoted students.

The majority of students think that getting accepted to a university is a fantastic experience, but obtaining a degree that one values is more important. Due to a lack of respect for one's career and an increase in job dissatisfaction, Kenya is currently experiencing a shortage of human resources in a number of professions, despite an increase in university enrollment. The gap may be caused by professionals who are not employed in their training field because they do not respect their study programs. At Pwani University, there have been reports of attrition, deferral, and the permission of a limited number of intra- and inter-school transfers.

Some programs may generate indifference during training and later at work because of individual cognitive preferences that may not have been taken into account and addressed in university-level training programs, career choices at work, and student program selections. The aforementioned backdrop of growing enrollment rates and low satisfaction among college students globally underscores the necessity for additional action. The current study provides justification for efforts to align learners' cognitive types and study programs in order to stop the number of people suffering program dissatisfaction and, consequently, job unhappiness from increasing in the future. Determining the relationship between students' cognitive types and program satisfaction is the aim of this study.

* 1. **Objective of the Study**

The study's objective was to determine and assess how satisfied Pwani University undergraduate students were with their academic programs.

* 1. **Null Hypothesis**

There is no discernible difference in the cognitive styles of Pwani University undergraduates along the Field Independence–Field Dependence axis.

* 1. **Aim of the Study**

Investigating Pwani University undergraduate students' cognitive styles along the Field Independence–Field Dependence axis was the goal of this study.

* 1. **Significance of the Study**

1. In order for undergraduate students to have a successful studentship, the findings of this study may help them comprehend how their individual cognitive styles may impact their learning and academic program satisfaction.
2. The benefits and drawbacks of their specific cognitive style may also be explained to the students. Students may use this to help them decide which programs to enroll in.   
   Understanding their cognitive styles can help students modify and leverage their learning, problem-solving, and thinking patterns to fit program objectives.
3. Teachers and tutors may find the study's findings useful in better understanding the range of cognitive types among their students and in implementing teaching methods that suit their diverse preferences.
4. Training department chairs, deans, and university counselors on cognitive styles may be beneficial for Pwani University's administration in order to assist students in transitioning to programs that better fit their cognitive styles even after they have been placed by KUCCPS.
5. The findings of this study may also help parents identify their children's cognitive types and prevent them from being forced to engage in programs that are more advantageous to the learner than to them. It can be suggested that future curriculum developers and designers for teacher preparation incorporate cognitive styles as a subject in their courses.
6. The Commission for University Education, KUCCPS, and the Ministry of Education might use the study's results to create workable plans for improving students' program welfare by determining how to appropriately counsel them before they choose a high school program.
7. Finally, this study's findings will significantly broaden the academic community's understanding of the body of research on cognitive styles and program satisfaction.
   1. **Limitations of Study**

"Cognitive style" is a psychological word. Using a self-reporting technique could have been challenging since participants might have inflated, underestimated, or misreported the pertinent attributes. The researcher made the effort to rewrite and paraphrase the questions as necessary and distribute the tool to each student individually in order to address this.

1. **METHODOLOGY**

**Research Design:** Using a correlational approach, the degree of statistical link between the study variables was described. Because it facilitates the collection of quantifiable data regarding preexisting cognitive types, the design was chosen. The prediction of program satisfaction using cognitive style markers was also made possible by correlation design.

**Study area:**  This study took place at Pwani University. In the coastal region of Kenya, in the heart of Kilifi town, is a public institution called Pwani Institution. The neighborhood around Pwani University, which is close to the Indian Ocean, is mostly a fishing, tourism, and agricultural area.

**Target Population of the Study:** All undergraduate first- and third-year students at Pwani University were the subject of the study because first year are at the entrance of the university with much anxiety and third year have lots of expectations. In addition to determining if junior and senior undergraduate students had distinct cognitive styles, the researcher also sought to ascertain the degree of program satisfaction. Data was collected from 1,671 third-year students and 1,926 first-year students at Pwani University (Pwani University Admissions Office, 2020). The study involved both men and women from each of the university's seven schools.

**Sampling Technique:** In this study, individuals were selected by multistage sampling. The initial step in the sample procedure was to stratify the students by school. The study's participants were from the seven schools of Pwani University. Purposive sampling was used to guarantee that the study included an equal number of male and female pupils.

**Sample Size:** Pwani University had 3,597 target students at the time of sampling, including 1,926 first-year undergraduates and 1,671 third-year undergraduates (Pwani University Admissions Office, 2020). Using the sample size calculation table developed by Krejcie and Morgan (1970), the optimal sample size was determined by considering the required precision level and the estimated fraction of the sample in the population. A total sample of 351 students was selected. The seven schools of Pwani University made up this sample, which resulted in about 50 students per school and 25 students per department. According to the student population, the sample was then divided proportionately between first- and third-year undergraduate students; the researcher selected 189 first-year students and 162 third-year students. Male and female pupils were distributed equally.

**Research instruments:** The study made use of a student questionnaire on cognitive style and program satisfaction (CS&PS) and Wyss's (2002) Field Dependence Cognitive Style Checklist. The checklist contained nine statements that were in conflict.

**Pilot research:** was conducted in order to assess the participants' comprehension of the questions, the validity of the questionnaires, and the time required to determine the suitability and accuracy of the research tools. The CS & PS questionnaire used in this study was presented to thirty respondents twice, separated by two weeks, as part of a test-retest procedure to ensure the validity of the research tools.

**Data Collection Procedure:** A Certificate of Ethical Approval was given to the researcher by the Pwani University Ethics Review Committee. The clearance has been approved by NACOSTI, the National Commission for Science, Technology, and Innovation. Additionally, the researcher met with the deans and department heads at the selected institutions to build rapport, obtain consent, and explain the study's goal. Thereafter, the researcher booked appointment with the participants and issued the questionnaires and given instructions on how to fill the questionnaire

**Data Analysis:** The data was quantitatively analyzed using the Statistical Package for Social Sciences (SPSS). Using descriptive statistics such as percentages, frequencies, pie charts, and frequency tables, together with data coding, a profile of the students' gender, course of study, cognitive style, and program satisfaction was produced.

1. **RESULTS AND DISCUSSION**
   1. **Response Rate**

The researcher distributed surveys to 351 undergraduate students from Pwani University's seven schools. A summary of the return rate is given in *list 1.*

|  |  |  |
| --- | --- | --- |
| **Research Tools** | **Number of Respondents** | **Questionnaire Return Rate** |
| Questionnaires Returned | 286 | 81.5% |
| Questionnaires not returned | 65 | 18.5% |
| **Total** | **351** | **100%** |

***list 1:*** *Questionnaire Return Rate*

351 questionnaires were sent out, however 65 of them were not returned, according to list 1. This resulted in 81.5% of the surveys being returned. Mugenda and Mugenda (2003) assert that a questionnaire return rate of above 50% is enough for data processing in research. For the current study, a response rate of 81.5% was considered adequate to move forward with data analysis.

**3.2 Demographic Information of the Respondents**

The respondents' demographic information is shown in this section, along with their departments, sex, age, school, and academic year.

**3.2.1 Sex of the Respondents**

Whether there were gender differences in the cognitive styles of Pwani University undergraduate students was the aim of the study. According to certain previous studies, the proportion of male students who are field-independent was higher than that of female students (Rostampour & Niroomand, 2014; Oginga, 2020). The sex-related findings of the respondents are shown in *Figure 1.*

***Figure 1:*** *Distribution of respondents according to Sex*

*Figure 1* shows that the distribution of the two sexes was almost the same: males (54.2%) and females (45.8%). The distribution that has been shown was the result of the study sample frame, which anticipated that there would be an equal number of male and female respondents in order to compare them.

**3.2.2 Age of the Respondents**

Age was used as an intervening variable in this investigation. The selection of undergraduate students under 25 was done to account for age. A person's cognitive style may change by the time they are 25 years old, according to previous studies, hence age was a key issue. Its delimitation was based on this, so data collection was restricted to the relevant age range. In accordance with the findings, the bulk of respondents (28%), who were 24 years old, were followed by those who were 22 years old (21%), 23 years old (19.2%), 20 years old (14.6%), 19 years old (9.1%), 18 years old (4.5%), and the least number, 21 years old.

***Figure 2:*** *Distribution of respondents according to age*

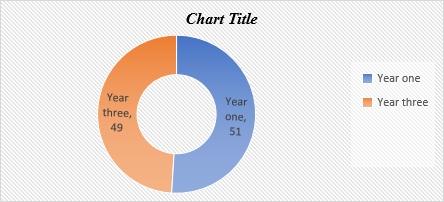
**3.2.3 Respondent’s school**

The researcher was interested in collecting data from the seven schools (faculties) at Pwani University in order to represent all students. In *Figure 3*, the depiction from the other school is shown. The results indicated that the respondents were affiliated with the following schools: School of Business and Economics (13.6%), School of Pure and Applied Sciences (14.8%), School of Education (15.1%), School of Humanities and Social Sciences (14.5%), School of Health and Human Sciences (13.8%), School of Agricultural Sciences and Agribusiness (14.9%), and School of Environmental and Earth Sciences (13.3%). The profile reflects the sample frame, which sought to guarantee equitable representation of juniors from all schools so that findings could be extended to the entire student body at Pwani University.

***Figure 3*** *Distribution of respondents according to school*

**3.2.4 Respondents’ Year of Study**

The results from the respondents' academic year are shown in *Figure 4.* 51% of respondents were first-year students, and 49% of respondents were third-year students, per the findings. Section 3.5.2 states that the sampling was appropriate due to the number of students in each year. Because the population included more first-year students, the sample reflected the greater prevalence. This was done on purpose to ensure that program satisfaction and cognitive styles could be robustly generalized to all Pwani University undergraduate students.



***Figure 4:*** *Distribution of respondents according to year of study*

* 1. **Satisfaction with Academic Programmes among Undergraduate Students**

Assessing the degree of program satisfaction among undergraduate students at Pwani University was the aim of this study. In order to operationalize student satisfaction with academic programs, factors such as academic success, professional aspirations, program loyalty, and whether or not they had put off their studies were taken into consideration. The student questionnaire contained nine statements that were used to determine the level of program satisfaction. The researcher reverse-coded the seventh and eighth things first because they had been adversely mentioned, and then she started looking at program satisfaction. By using reverse coding, the scoring consistency of the 4-point Likert scale was ensured. The researcher then computed each respondent's responses to the nine statements. The sum of each respondent's scores, which varied from 9 to 36, was recorded.

* + 1. **Choice of Programme**

The SPSS spreadsheet that is attached shows that program satisfaction was represented by a value of 2 for the range of 19 through 36, and program discontent by a value of 1 for the range of 1 through 18. In order to analyze the goal, the researcher then employed frequency counts, cross tabulations, and chi-square testing. Counts of frequencies were displayed using graphs. The study employed three questions to measure program loyalty. The study sought to determine whether students selected the program on their own, whether they participated in all activities associated with their program of study, and whether they appreciated the program they were pursuing. Agreement with the message was calculated by adding the prevalence of agree and strongly disagree.

***Figure 5:*** *Respondents Choice on the Programme of study*

The majority of respondents 60.8% agreed, 13.5% strongly agreed, 21.7% disagreed and 4% disagreed that they personally selected the program they were pursuing as shown in *figure 5* above.

**3.3.2 Love of the Programme**

According to *Figure 6*, the vast majority of participants (64.6%) expressed their love affection for the program they were enrolled in. Slightly more than a third (35.4%) of the students, however, said they were dissatisfied with their education. The results are as follows. Additionally, students were questioned if they took part in every activity in their academic program.

***Figure 6:*** *Love for their Programme of study*

**3.3.3 Taking Part in Programme Activities**

The majority of participants (77.6%) agreed that they took part in every activity offered by the program they were pursuing, as seen in *Figure 7*. Nevertheless, nearly a quarter (22.4%) said they didn't take part in every activity offered by the program. In this study, three questions were used to gauge career desire. The study aimed to determine whether the students wanted to become the best educated in their profession, whether they wanted to hold a high leadership position in their field, and whether they planned to mentor others to enroll in their program. By adding together, the frequency of agree and strongly disagree, an agreement was reached. The findings are displayed in *Figures 7.*

***Figure 7:*** *Participation in Programme Activities*

**3.3.4 Level of Degree**

The majority of students (61.5%) aspired to obtain the greatest degree of education possible in their field of study, as seen in *Figure 8*. Though 13.3% of the respondents, however, stated that they had less desire to pursue further education in their current field of study. In other words, a quarter (25.2%) of the respondents strongly disagreed with the idea that they intended to pursue the highest level of education in their field of study. Another question posed to the respondents was if they aspired to hold senior leadership roles in their industries. Results are shown in *Figure 8.*

***Figure 8:*** *Respondents future aspiration to reach the highest level of education*

**3.3.5 Leadership Roles**

Another question posed to the respondents was if they aspired to hold senior leadership roles in their industries. *Figure 9* indicates that over half (59.1%) of the participants expressed a desire to have a high-level leadership role within their field of study. However, the remaining individuals (40.9%) shown a lack of ambition in their field of study by stating that they had no aspirations to hold high leadership positions in their current fields of study.

***Figure 9:*** *Respondents hope to occupy top leadership positions in their fields*

**3.3.6 Mentoring others**

Another question posed to the respondents was whether they wanted to guide others into their fields of study. According to *figure 10*, the majority of students (62.2%) expressed a desire to mentor others in their field of study. Nonetheless, over a quarter (37.7%) of the participants expressed no interest in guiding others to pursue their field of study. This suggests that over forty percent of the students did not think well enough of their study program to recommend it to others. By asking the respondents if they had postponed a semester or semesters of their education because they did not enjoy the curriculum, the study looked at deferment.

***Figure 10:*** *Respondents hope to mentor other people to join their field of study*

**3.3.7 Academic Satisfaction**

*Figure 11* reveals that 15.3% of the respondents postponed one or more semesters during their studies due to dissatisfaction with their course of study. In their course of study, students were required to report on how well they were doing academically. The following figure summarized the aggregate. The majority of respondents (72.8%) agreed that they had done well academically in their program of study, as shown in *Figure 11*. Of the respondents, over one-third (11.9%) stated that they did not fare well academically in their course of study. According to their own assessments, a significant portion of students did not perform well in their study programs, which makes this conclusion vital. A summary of the frequency of satisfaction and dissatisfaction levels is shown in *table 1* below.

***Figure 11:*** *Academic Satisfaction*

|  |
| --- |
| *Respondence Frequency Percentage Valid Percentage* |
| *Dissatisfied 62 21.7 21.7*  *Satsfied 224 78.3 78.3* |
| *Total 286 100.0 100.0* |

***Table 1:*** *Student Satisfaction with academic Programmes*

It is alarming to learn from the results that little over one-fifth (21.7%) of the students were unhappy with their course of study. Nonetheless, the vast majority (78.3%) expressed satisfaction with their present course of study. The fact that the majority of students selected the programs they were enrolled in or had the option to switch to other programs of their choosing may be the reason for this. Ramos et al. (2015), Pollard et al. (2004), and Selvam (2017) found that undergraduate students were more unsatisfied with their study programs than these findings. A key component of academic retention and advancement is student satisfaction with their studies.

It can discourage pupils from putting off their study and encourage better performance levels. Numerous studies have revealed that academic satisfaction is the main cause of deferments. For example, Njoroge et al. (2022), Harvey et al. (2022), and Hilman (2005) state that the majority of undergraduate students postpone their studies due to discontent. In particular, Harvey et al. (2022) discovered that about 10% of Australian students postpone their education, and a third did not finish their present year of study because they were dissatisfied. The majority of individuals who returned, the authors also discovered, did not enroll in the programs they had postponed.

**3.3.8 Sex and Programme Satisfaction**

This study supports Hilman's 2005 study, which discovered that most students who put off their studies and tried to return frequently enrolled in another program. Simply put, they did not enjoy their first meal or it did not live up to their initial expectations, therefore they took this action. It follows that academic happiness is an intrinsic motivator that can help universities avoid attrition. To ascertain program satisfaction among male and female students, a cross-tabulation of sex and program satisfaction was conducted. The findings are displayed in *Table 2* below.

|  |
| --- |
| *Gender Dissatisfied Satisfied Total* |
| *Sex Male 43 (27.7%) 112 (72.3%) 155 (100%)*  *Female 19 (14.5%) 112 (85.5%) 131 (100%)* |
| *Total 62 (21.7%) 224 (78.3%) 286 (100%)* |

***Table 2:*** *Crosstabulation of Sex and Programme Satisfaction*

Male students were more dissatisfied with their study programs (27.7%) than female students (14.5%), according to *Table 2* findings. While female students were satisfied (85.5) than male students. Thomas and Muronga (2022) found that male students were more dissatisfied with their study program (54.1%) than female students (45.3%). These findings are consistent with their findings. The greater male discontent may be viewed from the broader standpoint of prospects for the future in the context of gender parity, where comparatively more women may have greater options for job advancement than men. More test and analysis were conducted by chi-square test below.

|  |
| --- |
| *P. Value df Asymptotic Significance 2-Exact Sig. 1-Exact Sig.* |
| *Pearson Chi-Square 7.328a 1 .007*  *Continuity 6.569 1 .010*  *Correction5*  *Likelihood Ratio 7.521 1 .006*  *Fisher’s Exact Test .009 .005*  *Linear-by-Linear (Ass) 7.302 1 .007* |
| *No. of Valid Cases 286* |

***Table 3:*** *Chi-Square Tests (Sex and Programme Satisfaction)*

The results in *Table 3* showed that the p-value was less than.05. This suggests that when it came to program satisfaction, there was a notable difference between male and female students. These results corroborate Daniel et al. (2017). They do, however, contradict the findings of Nauta (2007) and Ramos et al. (2015), who discovered a negligible correlation between program satisfaction and sex.

**3.3.9 School (department) and Programme Satisfaction**

The study performed a cross-tabulation between school and programme satisfaction to ascertain whether students from different schools and had different levels of programme satisfaction. The results are displayed in *Table 4.*

|  |
| --- |
| *Program Satisfaction Dissatisfied Satisfied Total* |
| *School of Education 18 (42.9%) 24 (57.1%) 42 (100%)*  *Humanities and Social Sciences 13 (31%) 29 (69%) 42 (100%)*  *Business and Economics 6 (12%) 44 (88%) 50 (100%)*  *Health and Human Sciences 9 (26.5%) 25 (73.5%) 34 (100%)*  *Agricultural Sciences and Agribusiness 4 (12.1%) 29 (87.9%) 33 (100%)*  *Environmental and Earth Sciences 5 (14.7%) 29 (85.3%) 34 (100%)*  *Pure and Applied Sciences 7 (14%) 43 (86%) 50 (100%)* |
| *Total 62 (21.7%) 224 (78.3%) 286 (100%)* |

***Table 4:*** *Cross tabulation of school and programme satisfaction*

The School of Education students had the highest degree of discontent (42.9%), followed by the School of Humanities and Social Sciences and the School of Health and Human Sciences (31% and 26.5%, respectively), according to the results in Table 5. Dissatisfaction was generally lower (less than 15%) among students in science-focused programs and the School of Business and Economics. Less than one-fifth (12.1%) of the respondents in the School of Agricultural Sciences and Agribusiness, for example, stated that they were not happy with their education. One explanation for this could be because students attending these institutions were required to enroll in courses that they personally choose. Academic satisfaction has been found to be influenced by a number of factors, including employment, financial status, and academic performance (Zhiqiang & Meijun, 2019; Sturtz, 1971; Nauta, 2007; Kara, 2016). Students are likely to be more satisfied with programs that will provide them with better employment terms than others, for example. Perhaps this explains why most students in science programs are more satisfied than others. These programs are thought to be more attractive to employers.

|  |
| --- |
| Value df Asymptotic Significance (2-sided) |
| Pearson Chi-Square 224.298a 6 .000  Likelihood Ratio 240.916 6 .000  Linear-by Linear Association 130.260 1 .000 |
| No. of Valid Cases 286 |

***Table 5:*** *Chi-Square Tests (School and Programme Satisfaction)*

The results in *Table 5* showed that the p-value was less than.05. This suggests that students from the different institutions' levels of program satisfaction varied significantly. Tomas and Muronga (2022) and Ramos et al. (2022) found that students who took science courses, like medical, were more likely to be satisfied than those who took arts courses, like music. This finding is consistent with their findings, which showed notable disparities in satisfaction levels.

**3.3.10 Year of Study and Programme Satisfaction**

Additionally, a cross-tabulation of program satisfaction and study year was conducted to ascertain the degree of satisfaction among students in various study years. The results are displayed in *Table 6*.

***Programme Satisfaction***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | ***Dissatisfied*** | ***Satisfied*** | ***Total*** |
| *Year of Study* | *First-year* | *5 (3.4%)* | *141 (96.6%)* | *146 (100%)* |
|  | *Third year* | *57 (40.7%)* | *83 (59.3%)* | *140 (100%)* |
| ***Total*** |  | ***62 (21.7%)*** | ***224 (78.3%)*** | ***286 (100%)*** |

***Table 6:*** *Cross-tabulation of Year of Study and Programme Satisfaction*

Compared to their third-year colleagues, who had a frequency of just 59.3%, first-year students (96.6%) expressed greater satisfaction with their study programs, according to the findings in *Table 6.* Furthermore, nearly half of third-year students (40.7%) expressed dissatisfaction with their study plans, according to the findings. One possible explanation for this could be that first-year students had not had much opportunity to interact with their programs at the time data was gathered, making it difficult to assess their level of satisfaction. Conversely, third-year students may already have known what the program involved, had field attachment experiences, and perhaps even met with professionals in the same field. Additionally, some might have attempted to alter the program early on but failed. Additionally, some could have intended to enroll in other programs following graduation, now that they have a better understanding of their chances.

|  |
| --- |
| *Program Satisfaction Value df Asymptotic 2-Exact Sig. Exact Sig.*  *Significance (sided) (2-sided) (1-sided)* |
| *Pearson Chi-Square 58.531a 1 .000*  *Continuity Correlation5 56.355 1 .000*  *Likelihood Ratio 66.252 1 .000*  *Fisher’s Exact Test .000 .000*  *Linear-by-Linear Association 58.326 1 .000* |
| *No. of Valid Cases 286* |

***Table 7****: Chi-Square Tests (Year of Study and Programme Satisfaction)*

The results in *table 7* suggests that there was a notable variation between junior and showed that the p- value was less than 0.5 senior undergraduate students' program satisfaction at Pwani University. Hasan et al. (2008) observed no significant difference in program satisfaction between senior and junior learners, which was in contrast to the findings of this study. Ramos et al. (2015) found that students in their early years of study were less satisfied with the programs than those in their final years of study. These findings likewise ran counter to those findings. According to Daniel et al. (2017), the majority of students (65.4%) expressed satisfaction with the overall quality of university services. According to the Daniel et al. study, student-teacher interactions, the facilities available, and administrative support services all influenced how satisfied students were with their programs.

**3.3.11 Age and Programme Satisfaction**

In addition to the aforementioned general services, Ntabathia (2013) contended that there was a substantial correlation between student happiness and service quality and other important institutional features like flexibility, the range of programs available, and the university's reputation. Seven university service provision constructs and program satisfaction were found to be positively correlated by Alves and Raposo (2007). The teacher-student interaction also has a significant impact on student happiness, according to Zhiqiang and Meijun (2019). Cohen (2011), on the other hand, demonstrates that learner satisfaction is linked to the readiness and style of teachers. It has been demonstrated that this factor influences student happiness just as much as the experiences that their university provides. A crosstabulation of program satisfaction and age is displayed below.

|  |
| --- |
| Age Programme Satisfaction Dissatisfied Satisfied Total |
| 18 2 (15.4%) 11 (84.6%) 13 (100%)  19 5 (19.2%) 21 (80.8%) 26 (100%)  20 9 (21.4%) 33 (78.6%) 42 (100%)  21 2 (20%) 8 (80%) 10 (100%)  22 13 (21.7%) 47 (78.5%) 60 (100%)  23 14 (25.5%) 41 (74.5%) 55 (100%)  24 17 (21.3%) 63 (78.8%) 80 (100%) |
| Total 62 (21.7%) 224 (78.3%) 286 (100%) |

***Table 8:*** *Cross Tabulation of Age and Programme Satisfaction*

There are comparatively little differences in the degree of satisfaction with the study program across all age groups, according to the results in Table 9. With the exception of students aged 23 (74.5%), slightly more than three-quarters of students of all ages expressed satisfaction with their course of study. According to the results, overall satisfaction decreased somewhat as age increased. This conclusion supports previous research on the connection between program satisfaction and study year. *Table 9* summarizes the results of a test of significance that was used to determine whether the differences were significant.

|  |
| --- |
| Chi-Square Tests Value df Asymptotic. Sig. (2-sided) |
| Pearson Chi-Square .884a 6 .990  Likelihood Ratio .894 6 .989  Linear-by-Linear Association .285 1 .593 |
| No. of Valid Cases 286 |

***Table 9:*** *Chi-Square Tests (Age and Programme Satisfaction)*

The results in *Table 9* showed that the p-value was greater than.05. Age and program satisfaction did not significantly correlate, for this reason. Ramos et al. (2015) reported that younger students were less happy with their study programs than older students, which is in contrast to the current conclusion. It should be emphasized, though, that while a learner's age has no bearing on how satisfied they are with a program, their degree of study (as previously indicated) is a significant factor. Since the majority of studies, including those by Daniel et al. (2017), Ramos et al. (2015), Ntabathia (2013), and Raposo (2007), concentrated on study year and program satisfaction, the results of the current study could not be compared to those of earlier research. Future research can try to close this gap by examining a larger age range than was covered in this study.

1. **CONCLUSION**

Characterizing the cognitive styles of Pwani University undergraduate students in terms of field dependency and independence was the aim of the study. A little over half (54.9%) of the learners had field-independent cognitive styles, whereas 44.8% had field-dependent ones, according to the study. The implication is that most children prefer to learn on their own rather than following rules. The survey also found that at Pwani University, the highest percentage of Field Dependent students (69.5%) and Field Independent students (74.8%) were in the male and female student populations, respectively. Additionally, children who attended schools with a strong scientific focus were more likely to be Field Independent, whereas students who attended schools with a strong arts focus were more likely to be Field Dependent.

This result is consistent with earlier research that showed men were more independent in the field than women. The p-value (0.000) is less than.05. This is in accordance with the Chi-square significance tests employed in the study. It implies that the male and female students at Pwani University think in quite different ways. According to the study, there was no significant correlation between age and cognitive type.

The results of the study indicate that there are notable differences in the cognitive styles of undergraduate students at Pwani University. Third-year students' cognitive styles were very different from first-year students'; a larger percentage of third-year students were field independent, whereas a somewhat higher percentage of first-year students were field dependent. This implied that people's cognitive styles had a slight, progressive tendency to change as they age, which is why the researcher had to select students under 25. Significant gender differences in students' cognitive styles are also revealed by the study, indicating that the unique traits of men and women cannot be disregarded in the learning process.

1. **RECOMMENDATIONS**

**5.1 Recommendations for Policy and Practice**

1. Given that 21.7% of students were unhappy with their programs of study and 15.3% of students put off their studies because they did not enjoy them, the study recommends that Pwani University do more to satisfy the academic demands of both its students and its clients.
2. According to the report, Pwani University's administration should support as many first-year undergraduate students who ask for intra- and inter-school transfers to move programs they choose through academic mentorship programs in order to boost productivity, program loyalty, and academic achievement. This is due to the fact that the study discovered that the undergraduate students at the university have widely disparate cognitive styles. The study found that just around half of the students' requests were met.
3. The Commission for University Education, KUCCPS, and the Ministry of Education can use the study's findings to create important plans for improving high school students' well-being by giving them the right advice before choosing a program. An example of this would be to give four pupils cognitive style assessments and then provide recommendations for programs that could be best suited for them.
4. The study found that learners' preferences for the frame of reference, learning environment, and incentive source differed according to their cognitive type. Thus, the research indicates that teachers should engage pupils in more academic activities that best fit their cognitive preferences in order to enhance their learning capacity and foster intellectual growth.
5. To meet the distinct cognitive type preferences of every student, teachers must use a variety of educational tactics.
6. In order to attain program satisfaction, Pwani University should hold academic seminars to assist all undergraduate students in understanding their varied cognitive styles on the field dependence-field independence dimension and the need of matching them to academic programs of study. Students' thoughts of leaving the program and the number of semester deferments may be reduced as a result.

**5.2 Recommendations for Further Research**

1. Pwani University was the only institution to respond to the survey. This study should therefore be replicated in other Kenyan universities or institutions.
2. The focus of future research should be redirected to investigate the effects of cognitive types on academic accomplishment at various learner levels, including graduate students.
3. Additional factors that impact academic program satisfaction and other reasons for deferment and attrition in higher education should be incorporated into the program satisfaction tool.
4. A study on the relationship between cognitive kinds and job success should be carried out after graduation.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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