**Marketing Analytics - DAT-6033 - VNA1**

**Team Assignment 3.2**

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1. **Case Processing Summary**

* **Valid Cases**: 44/45 (97.8%) for all variables (1 missing case excluded).
* **No major missing data issues** affecting the analysis.

1. **Descriptive Statistics (Report Table)**

**Key Group Differences**:

| **Variable** | **Light Users** | **Medium Users** | **Heavy Users** | **Notable Pattern** |
| --- | --- | --- | --- | --- |
| **Awareness** | 2.44 | 4.40 | **6.00** | Heavy > Medium > Light |
| **Attitude** | 2.53 | 4.00 | **5.94** | Heavy > Medium > Light |
| **Preference** | 3.39 | 3.50 | **5.63** | Heavy > Medium ≈ Light |
| **Purchase Intention** | 4.06 | 4.20 | 3.94 | No clear trend (p=0.933) |
| **Loyalty** | 4.00 | 4.00 | 3.88 | No difference (p=0.974) |

* Heavy users have a higher score for awareness, attitude and preference.
* There are no statistically significant differences between groups for purchase intention and loyalty.

1. **ANOVA Statistics:**

**Statistically Significant Differences: (p < 0.001)**:

1. **Awareness** (F=49.234, η²=0.706)
   * **Large effect size** (η² > 0.14 = large).
2. **Attitude** (F=37.234, η²=0.645)
   * **Large effect size**.
3. **Preference** (F=19.201, η²=0.484)
   * **Large effect size**.

**As noted from class learnings, the Non-Significant Differences**:

* **Purchase Intention** (F=0.070, p=0.933, η²=0.003)
* **Loyalty** (F=0.027, p=0.974, η²=0.001)

1. **Post-Hoc Analysis Needed (Tukey HSD)**

Because ANOVA was statistically significant for awareness, attitude, and preference, run Post-Hoc tests to determine which specific group pairs are different:

1. **Awareness**: Heavy vs. Light and Heavy vs. Medium should be different.
2. **Attitude**: Heavy users differ from both light and medium.
3. **Preference**: Heavy users differ from light/medium (but medium ≈ light).
4. **Key Conclusions**

* Heavy Users are different in:
  + Brand awareness is higher, a more positive attitude, and a stronger preference than other groups.
* Purchase Intention & Loyalty:
  + There are no meaningful group differences.
* Effect Sizes:
  + Awareness (η²=0.706) and attitude (η²=0.645) explain ~65-70% of variance by usage group—effectively significant.

1. **Recommendations for Next Steps**

Tukey’s HSD or Games-Howell post-hoc tests help confirm pairwise differences.

Discriminant analysis shows which variables discriminates users into groups (awareness may be the strongest discriminating factor).

* **Business implications**:
  + There's an opportunity to target "heavy users" with loyalty programs (as they already have high awareness/attitude).
  + Understanding why purchase intention and usage do not align (maybe heavy users are price-sensitive?).

Your business output confirms your initial models, but shows purchase intention and loyalty were not differentially able to differentiate the three groups. Focus on awareness, attitude, and preference for your segmentation strategies.