

# Supportiv Take Home Challenge Final Report

## Moderator Analysis:

### Insights:

**Top 5 Moderator:** High Satisfaction, More number of sessions, low avg\_response\_time

Reason for considering number of sessions over response time: Valued more customers satisfaction over keeping response time low. Moderator might have handled complicated cases and satisfied more users.

moderator_id	avg_satisfaction	avg_response_time	total_sessions
c3f76036-879a-4b96-abca-a0fe289bae01	5	13.93	460
df47acaf-2bf3-4bdf-b50f-ba99b8d2fa89	5	15.66	459
34bf3f2-34d3-4105-966f-ada0b1332093	5	16.7	447
38790191-59cb-43ec-81aa-41e76ebc3cc3	5	7.08	435
6ed567f1-772b-4615-9ca1-5bb42ee7a9c8	5	5.01	413

**Top 5 Moderator:** Low satisfaction, high avg\_response\_time, less number of sessions

Moderator 1de0004c-c52a-4f9d-b038-d89d0c0646fd and 59c2aae8-034f-4328-a878-d940f8a503a9 can be outliers.

	moderator_id	avg_satisfaction	avg_response_time	total_sessions
1	1de0004c-c52a-4f9d-b038-d89d0c0646fd	1	30.71	373
2	59c2aae8-034f-4328-a878-d940f8a503a9	1	28.97	430
3	94cd72c7-08bf-404a-9659-5545af4883ab	1	18.16	98
4	bdc6928a-7809-459e-8369-e1f53da93148	1	15.96	146
5	2b85ea0c-ec66-4cab-85cc-5128d99e2a17	1	5.35	180

Reason for considering response time over number of sessions: Moderator might have handled complicated cases so the response time might be high. Even after knowing that this would lead to less sessions conducted in a given time period, they didn't put much effort. If total\_sessions conducted are also high enough they are lacking skills.

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Performance Categories:
performance_category  avg_response_time  chat_sessions_moderated  \
0      Low          11.254651          236.558140
1      Medium        10.898158          228.131579
2      High          12.544737          300.157895

user_satisfaction_score
0      1.883721
1      3.526316
2      5.000000
```

Response time has no significant correlation with satisfaction, but higher sessions moderated slightly improve satisfaction. Top moderators handle ~300+ sessions with consistent satisfaction.

**Engagement/Effectiveness:** Engagement = sessions moderated; Effectiveness = satisfaction scores.

**Trends:** Satisfaction clusters around 3–4; outliers exist for response times >25 mins.

**Concerns:** Low-performing moderators handle fewer sessions, impacting engagement.

## Recommendations

- Train low performers
- Focus on communication quality
- Share best practices from top moderators.

## User Activity and Recommendation Analysis:

### SQL output Insights:

**Video → Blog** and **Podcast → Blog** consistently show negative CTR, disrupting engagement.

Same-type transitions (e.g., **Video → Video**) maintain high engagement across all days.

Fridays show strong performance across transitions, while Wednesdays favor Video-first flows.

### Scope:

Validate timestamps by ensuring standardized time zones, addressing session overlaps (e.g., late-night sessions), and analyzing time gaps between transitions. Check for peak activity hours (morning vs. evening) and data completeness to ensure transitions are accurate and reflective of user behavior.

## Final Insights:

- Longer sessions correlate with higher feedback scores, showing satisfaction increases with engagement.
- Videos drive the highest CTR (~0.58) and session length (~67 min), while Blogs lead in feedback (~3.1).
- **Video → Video** and **Blog → Video** transitions maintain strong engagement, but **Video → Blog** disrupts CTR.

## Measuring Engagement/Effectiveness:

- **Engagement:** CTR, session length, and messages sent.
- **Effectiveness:** Feedback scores and transitions between recommendations.

## Trends and Patterns:

- Videos outperform in CTR and session length, with cross-type transitions like **Blog → Video** enhancing engagement.
- Feedback scores remain consistent across recommendation types, but CTR and feedback have no strong correlation.
- Weekends show longer sessions with passive engagement, while Wednesdays see the highest messaging activity, and Thursdays peak in satisfaction scores.
- Weekday variations highlight opportunities to tailor recommendations for higher engagement on Wednesdays and feedback improvements on Thursdays.

## Concerns/Anomalies:

- **Short sessions** (<15 min) show low engagement and feedback.
- Negative CTR transitions like **Video → Blog** disrupt user flow.
- **Time-specific activity variations** indicate different user behaviors on weekdays vs. weekends with Saturday and Sunday showing longer sessions but fewer messages sent.

## Recommendations:

1. Focus on **Video-first strategies** and high-performing transitions like **Blog → Video**.
2. Improve short session engagement by offering personalized recommendations or interactive content.
3. Avoid negative CTR transitions like **Video → Blog** by improving relevance and targeting.
4. Optimize recommendations for **high-engagement days (Fridays, Wednesdays)** and adjust content targeting based on time-of-day trends.
5. Enhance cross-type transitions (e.g., **Podcast → Video**) with dynamic linking to retain users.
6. Develop incentives for users with shorter sessions to increase engagement, such as quick surveys or gamified interactions.
7. Use mid-week peaks (Wednesday, Thursday) for testing feedback-driven features to maximize satisfaction.
8. Refine weekend recommendations to leverage longer session durations while boosting active participation.
9. Target Wednesday for active engagement campaigns (messaging-focused) and Thursday for initiatives that maximize feedback collection and satisfaction.