

Background

- Online surgical videos have become popular resources for surgical education and preparation.
- There is significant variability in the presentation of available online surgical videos.
- This study aims to assess and compare the educational quality of free flap instructional videos on public and paid platforms.

Methods

- Sample size was calculated to reach 80% power (n=13 per group)
- Educational quality of the videos was determined using a modified Laparoscopic Surgery Video Educational Guidelines
- 3 reviewers graded each video independently
- Assessed interrater reliability between the 3 reviewers
- Pearson’s correlation coefficients and Mood’s median tests to identify associations between educational quality score and different variables

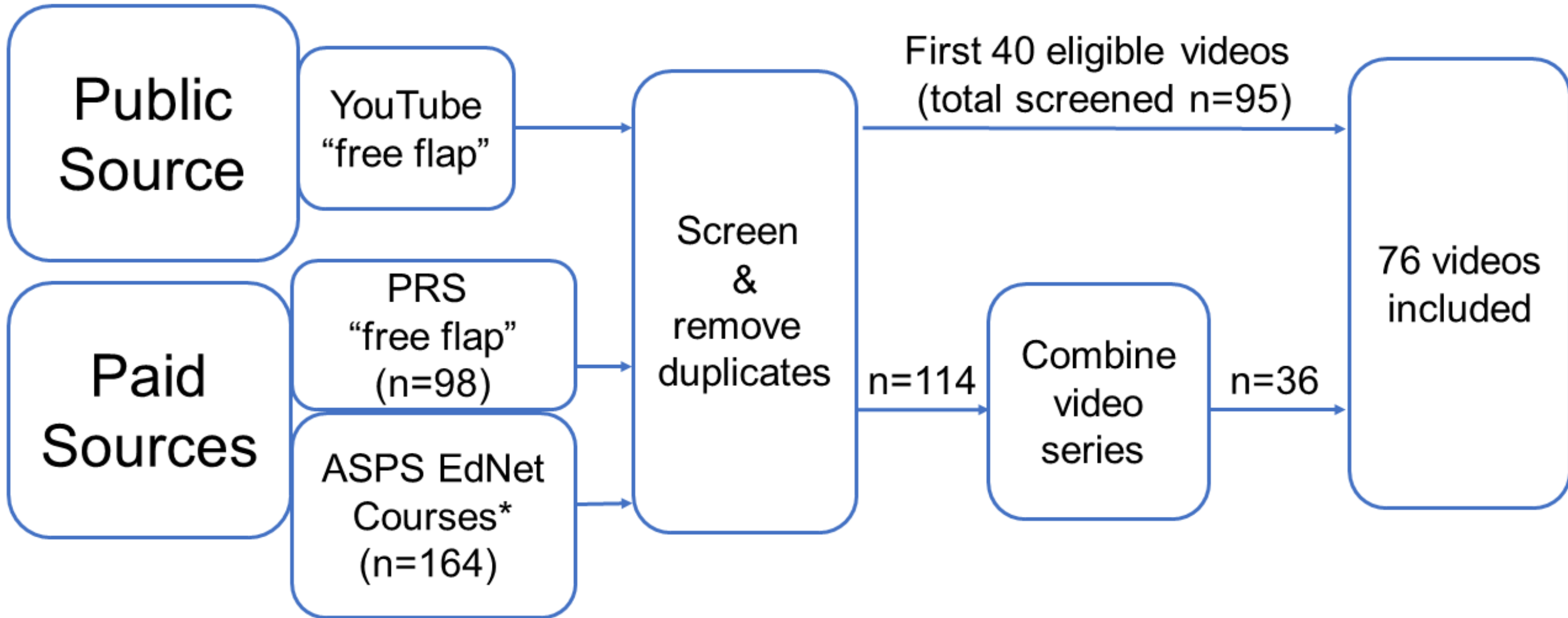


Figure 1. Flow Chart for Video Screening and Review Process.

Results

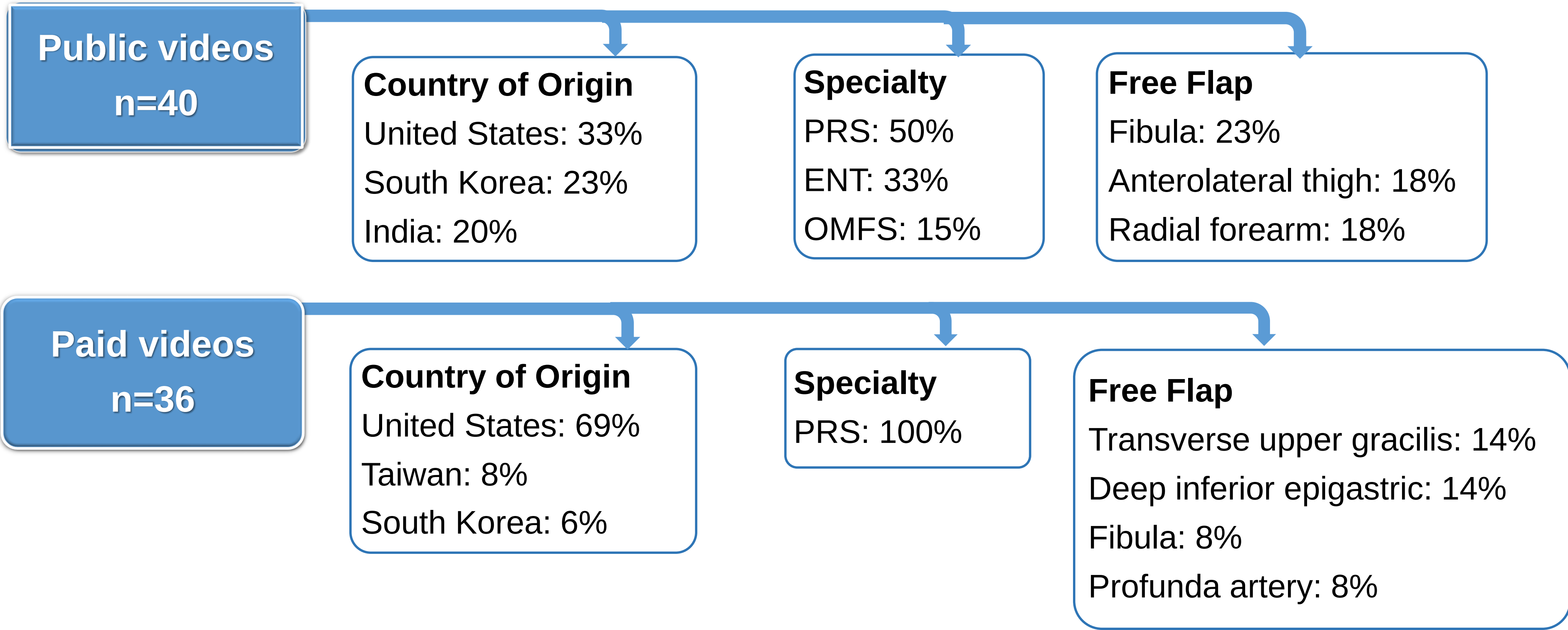


Figure 2. Characteristics of the Collected Videos.

| Quality Domain                                                        | Public (0 - 2) | Private (0 - 2) |
|-----------------------------------------------------------------------|----------------|-----------------|
| Q1. Authors and Institution information                               | 2 [1]          | 1 [1]           |
| Q2. Indications for surgery & other patient details                   | 0 [1]          | 1 [1]           |
| Q3. Patient & surgical team position, free flap donor/recipient sites | 1 [2]          | 1 [1]           |
| Q4. Step by step surgical procedure                                   | 2 [1]          | 2 [1]           |
| Q5. Clear intraoperative findings                                     | 2 [1]          | 2 [1]           |
| Q6. Operating time, postoperative management & morbidity              | 0 [1]          | 0 [1]           |
| Q7. Additional graphic aid                                            | 1 [1]          | 1 [1]           |
| Q8. Audio/written commentary in English language is provided          | 2 [0]          | 2 [0]           |
| Q9. Appropriate image quality and video speed, constant clear view    | 2 [0]          | 2 [1]           |

Table 1. Modified Laparoscopic Surgery Video Educational Guidelines for Educational Quality Scoring

Results

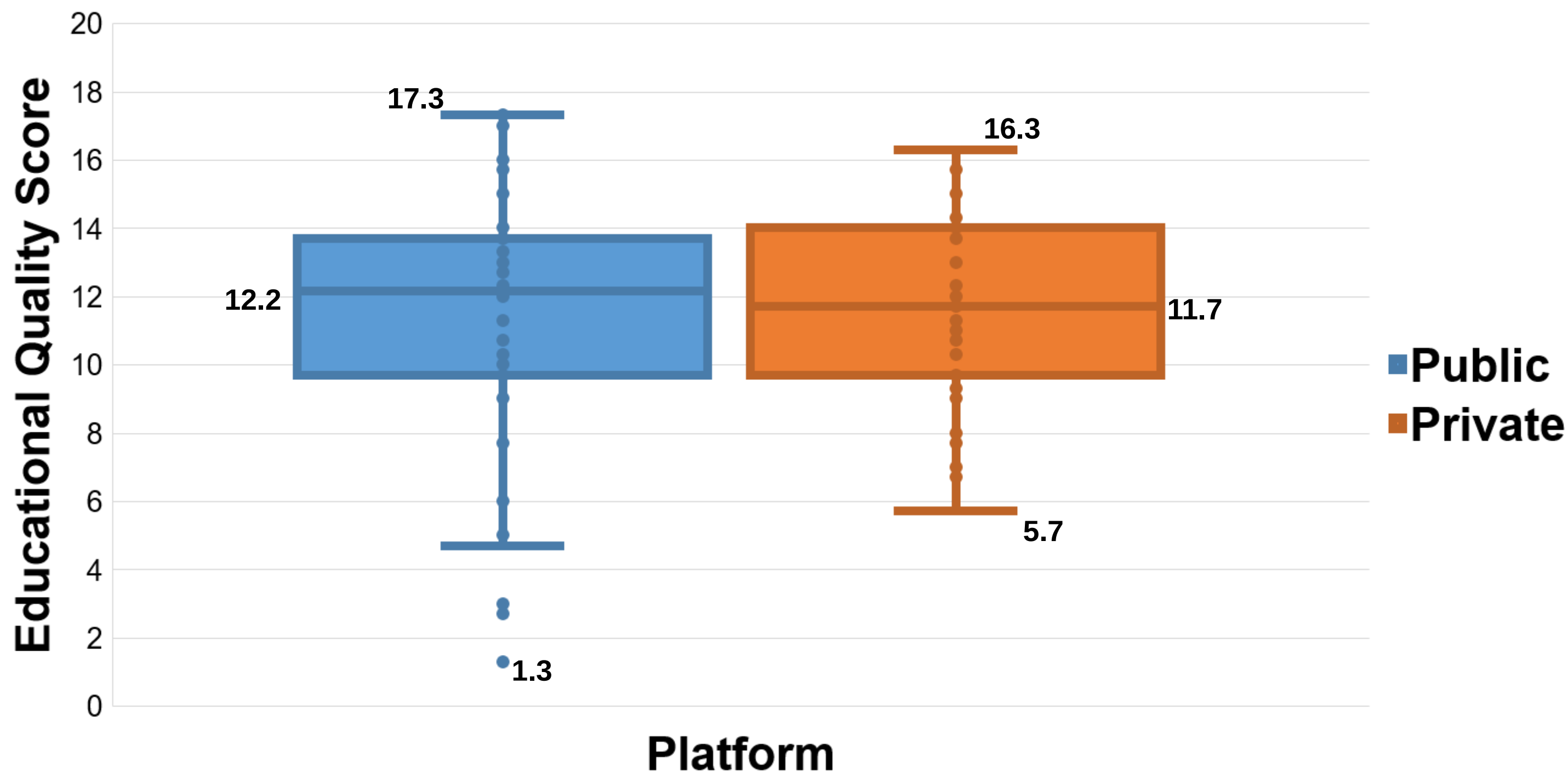


Figure 3. Box Plot of Quality Score between Public and Paid Platforms.

|                             | Public                  | Private      | P      |
|-----------------------------|-------------------------|--------------|--------|
| Video length (mins)         | 9.4 [12.3]              | 5.1(6.4)     | 0.15   |
| Educational quality         | 12 [5]                  | 12 [5]       | 0.94   |
| Days since upload           | 923 [862]               | 2100 [1678]  | 0.005* |
| Variables vs. Quality score | Correlation coefficient |              | P      |
| Video length (mins)         | 0.1                     |              | 0.15   |
| Days since upload           | 0.07                    |              | 0.55   |
| Interrater reliability      |                         | α=0.9 (high) |        |

Table 2. Results of Statistical Analysis

Conclusions

- Public and paid platforms may provide similar surgical education on free flap technique.
- All platforms can optimize video quality by including easy-to-add information such as credentials, indications for the procedure, and postoperative management.