Using Statistics for Club Success

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ASSISTANT COACH
LAKESIDE SWIM TEAM
Virtual Club Breakdown 2008-2009

Indv Age Stroke Percentage
Virtual Club Breakdown 2008-2009

Adjusted % of Total - STK

- Distance free: 13.12%
- IM: 15.37%
- Sprint free: 14.85%
- Fly: 15.06%
- Breast: 15.09%
- Back: 15.66%
Virtual Club Breakdown 2009-2010

Indv Age Stroke Percentage
Virtual Club Breakdown 2009-2010

Adjusted % of Total - Age Group

- 13 males: 5.85%
- 12 males: 6.12%
- 14 females: 6.95%
- 15 females: 7.56%
- 13 females: 7.79%
- 16 males: 7.88%
- 17-18 females: 8.34%
- 12 females: 8.42%
- 15 males: 8.44%
- 16 females: 8.46%
- 14 males: 8.78%
- 11 males: 8.82%
- 17-18 males: 9.57%
- 11 females: 9.73%
Virtual Club Breakdown 2009-2010

Adjusted % of Total - STK

Distance free: 14.02%
IM: 14.97%
Breast: 14.61%
Fly: 14.87%
Sprint free: 15.04%
Back: 15.39%
Here we see that both freestyles improved greatly over their 2008-09 scores, and with the exception of an 83 point increase in fly are solely responsible for the 1.5% increase in scoring from 08-09. It is obvious that the distance and sprinting improved and the others either stayed the same or dropped, but beyond that not much else is clear.
This is a comparison of the improvement of each class (08/09 compared to 09/10) divided up into male vs. female.

<table>
<thead>
<tr>
<th>Age</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 turning 12</td>
<td>-52</td>
<td>+1601</td>
</tr>
<tr>
<td>12 turning 13</td>
<td>-2269</td>
<td>-842</td>
</tr>
<tr>
<td>13 turning 14</td>
<td>-1</td>
<td>+863</td>
</tr>
<tr>
<td>14 turning 15</td>
<td>+303</td>
<td>+882</td>
</tr>
<tr>
<td>15 turning 16</td>
<td>+69</td>
<td>+800</td>
</tr>
<tr>
<td>16 turning 17/18</td>
<td>+372</td>
<td>+2097</td>
</tr>
<tr>
<td>Total</td>
<td>-1578</td>
<td>+5401</td>
</tr>
</tbody>
</table>

It should be noted that the jump between 12-13 is fraught with error in terms of a strict comparison, due to the conversion that takes place from 12 to 13. 12 year olds have 8 events that are counted vs. 13 for any 13 and overs. Thus the measurement between 12 and 13 is more of a depth issue vs. actual improvement. Classes with a lot of top swimmers will see a negligible drop in score or see it stay even, vs. classes with very little depth will more than likely see a large drop in score. That being said analysis of the scores shows a large discrepancy between the improvement of females and males. The author cannot at this point find a particular reason for this, but clearly from 11 years old and up the males, at least in this past year, improved dramatically more than females. The next analysis is looking at the bottom 7 vs. the top 7 (14 age groups male & female).
Notes 2008-2009

Top 7
Males 4 out of the top 7
Females 3 out of the top 7

Bottom 7
Females 4 out of the top 7
Males 3 out of the top 7

This statistic is not a very telling one; rather it is used more to back up the data above, another statistic showing males out performing females.

This is a comparison between the top 3 swims (a swim being a age group/gender combo) and the bottom 3 swims in comparison to the mean of the swims. The median was 8.38.

Top 3 Swims

<table>
<thead>
<tr>
<th>Age/gender</th>
<th>% of total score</th>
<th>+ difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 females</td>
<td>9.73%</td>
<td>1.45%</td>
</tr>
<tr>
<td>17-18 males</td>
<td>9.57%</td>
<td>1.19%</td>
</tr>
<tr>
<td>11 males</td>
<td>8.82%</td>
<td>.42%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>+3.06</td>
</tr>
</tbody>
</table>

Bottom 3 Swims

<table>
<thead>
<tr>
<th>Age/gender</th>
<th>% of total score</th>
<th>- difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 males</td>
<td>5.86%</td>
<td>-2.52%</td>
</tr>
<tr>
<td>12 males</td>
<td>6.12%</td>
<td>-2.20%</td>
</tr>
<tr>
<td>14 females</td>
<td>6.95%</td>
<td>-1.45%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>-6.15%</td>
</tr>
</tbody>
</table>

Difference between the two: 3.06%-6.15% = -3.09%
The overall theme after reviewing the numbers is twofold: 1) there was a large jump in freestyle scores this year, but very little jump with the other strokes; 2) there was a startling discrepancy with the improvement in girls scores vs. boys scores. Causes for these numbers would appear to be systematic and not flukes in statistics. Especially with the discrepancy in the girls numbers, a change would appear to be necessary.
Virtual Club Breakdown Winter 2009-2010

Adjusted % of Total - STK
Virtual Club Breakdown Winter 2009-2010

Fly
Virtual Club Breakdown Winter 2009-2010

IM
The 10,000 Hours Theory

- Chart your teams practice time vs. expected % in each group
- Multiply by the number of years spent in each group
- Figure out how many hours an athlete has practiced if they started at 8, and when they hit 10,000 hours
  - Assume they swim 4 years in college and attend practice regularly
Questions?

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