Bringing Sales Analytics to the Classroom: Teaching Sales Students How to Use Excel to Derive Insight From Sales Data

By Scott A. Inks

Customer Relationship Management (CRM), social selling, and other sales technology innovations have the potential to generate an overwhelming amount of data that may prove useful to those who understand how to analyze it. The next generation of sales professionals will need to have a well-developed analytical skill set in order to analyze available data and identify areas needing improvement, track the effectiveness of lead generation methods, and better manage their resource allocation to customers. This paper discusses how sales students are learning to use Excel to conduct sales-related analytics and derive meaningful insight from the analyses.

THE CHALLENGE

Selling has never been more competitive than it is today. Sales managers and salespeople are always on the lookout for new strategies, tactics, and tools that will help them get an edge over the competition. The expansion of Customer Relationship Management (CRM) systems, the incorporation of social media into the sales process (social selling), and implementation of content marketing are each strategies sales organizations are pursuing to gain a competitive advantage. One of the most promising strategies to becoming more competitive is to place greater emphasis on utilizing sales analytics.

Sales and marketing technology including social selling, customer relationship management (CRM), content marketing, and other lead generation tools have had a tremendous impact on the sales effort (Andzulis, et al. 2012). One of the consequences of employing these tools is the seemingly overwhelming amount of data the tools are capable of producing. Sales managers and salespeople capable of turning that data into meaningful and actionable information will gain an advantage over those that don’t. The challenge is identifying and mastering the right tools that will help sales managers and salespeople gain such an advantage.

The sales analytics market offers an increasing number of sales analytics tools, including stand-alone applications and those built into, or may be integrated into, existing CRM systems. Most CRM applications and other forms of sales process tracking tools offer salespeople and sales managers access to a wealth of data that may help them improve their sales performance (Tanner et al, 2005). Unfortunately, this data is often undervalued by salespeople and sales managers. Moreover, while these applications offer a certain degree of convenience, they often lack the ease, flexibility, and power of one of the most basic tools that has been around since the days of the first desktop personal computers – the spreadsheet.

A review of the sales curriculum from schools offering sales programs indicates most students pursuing a sales education, and by extension, sales careers are not being taught how to use Excel (or any spreadsheet application) to measure and improve sales performance and/or the effectiveness of lead generation tools (Loe and Inks 2014). Students acquiring such an analytical skill set will have an advantage over those that don’t. The purpose of this paper is to describe how the next generation of sales talent at one university is being taught how to use Microsoft Excel to glean actionable information from the relatively easily accessible sales process data available to salespeople and sales managers.

THE INNOVATION

Salespeople and sales managers are likely familiar with common sales metrics or key performance indicators (KPIs) such the following.

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The author has graciously supplied a data set for those interested. Please see the Journal of Selling website and click on this issue on the “Article Archive” tab to find the article and file.
• Close Ratio
• Lead Conversion Rate
• Quote to Close Ratio
• Sales by Lead Gen Method
• Sales by Product
• Sales Cycle Time
• Average Revenue Per Customer

These KPIs are often generated automatically by CRM applications, or are available via third party sales report generators. However, while these applications are relatively convenient, they limit the type of sales analyses salespeople and sales managers may perform. To provide greater flexibility and autonomy over the analysis, CRM applications such as Salesforce.com offer tools and tips for exporting data into Excel so that the user may perform more specialized and/or more complex analyses.

In a course focused on sales technology, students are taught how to use Excel to calculate the KPIs mentioned above, and a host of other less common indicators that provide unique insight into sales performance and lead gen method effectiveness. Students are taught how to calculate these metrics by using formulas, and also by using Pivot Table and the related productivity features (e.g., slicers, timelines). The objective is to provide students a set of valuable metrics and, perhaps more importantly, the ability to use Excel to analyze sales (and marketing) data in whichever way they choose.

The module on Excel and Sales Analytics begins with a cursory coverage of Excel basics (which should be a review for students successfully completing the required lower-division computer skills course). Following the overview of Excel, students are introduced to the more common sales metrics (e.g., close ratio, sales by product, average revenue per customer, etc.), including how they are calculated and the insight they provide. Next, students are provided an Excel worksheet containing sales data and are then walked-through the process of setting-up the data for analysis and actually conducting the analysis.

Once the students have the hang of how to calculate the more common sales metrics, the discussion shifts to how to use Excel to conduct other types of data analysis that have the potential to offer unique insight into how the salesperson is performing. Next, students are given an assignment that includes analyzing a set of sales data and offer commentary on what story the data may be telling. Here is an example of an assignment.

**STEP 1 – BASIC SALES PERFORMANCE ANALYSIS**

Students are given an Excel worksheet containing a salesperson’s sales data for a specified time frame (in this case, 6 months). Students conduct a quick analysis of the data to determine the salesperson’s close ratio (aka close rate or conversion rate). The close ratio is one of the most common metrics used by salespeople and sales managers to assess salesperson performance.

For this particular assignment, students (should) learn that the salesperson’s close ratio is 42.31%. In the next step, students are asked to discuss the salesperson’s performance and are instructed that the target close rate in the salesperson’s industry is between 45 and 50 percent. Like most sales managers, students quickly determine the salesperson needs to improve his/her performance. However, without any additional data or information, specific instruction for the salesperson on how to improve sales performance is difficult.

**STEP 2 – BASIC SALES PERFORMANCE ANALYSIS: DEEPER DIVE PART 1**

Students learn how to use Excel functions and Pivot Tables to dive deeper into the sales data to determine “the story” the data has to tell. Figures 1 and 2 (below) both show forecasted sales for each product in each stage of the sales pipeline. The difference is that the table in Figure 1 is a Pivot Table, and the table in Figure 2 was created using the Sumifs function. While Pivot Tables are relatively easy to use (once learned), mastering a handful of useful Excel functions (e.g., Sumifs, Countifs, and Index(Match)) provides students (and salespeople and sales managers) a better understanding of how Pivot Tables function and a greater sense of control over the analysis.

Whereas the close ratio focuses on the “wins,” examining the “losses” can also yield valuable insight. As part of the exercise, students take a closer look at the “losses” and break them down by the stages in the sales pipeline (in this case, Lead, Qualified Lead, Need Discovery,
Proposal, Negotiation, and Close). As shown in Table 1 above, just over 43% of losses occur at the “Need Discovery” stage of the sales process. Given this new information, students again discuss the salesperson’s performance and possible reasons for why this ratio is relatively high.

While discussing the high loss rate at the Need Discovery stage, the two primary explanations that emerge are 1) the salesperson is doing a poor job of qualifying leads, and 2) the salesperson needs to improve his/her questioning skills. Students discuss these two issues and what else they would need to know to gain additional insight.

**STEP 2 – BASIC SALES PERFORMANCE ANALYSIS: DEEPER DIVE PART 2**

Next, students examine (using functions first, then Pivot Tables) the losses and break them down by stage and by lead generation method. Table 2 presents the results of this analysis.

The information contained in Table 2 can stimulate discussion in several areas. However, the first issue to
discuss is the “unpacking” of the Need Discovery losses. The additional analysis indicates a majority of the prospects lost during need discovery were generated by the advertising campaign. One explanation for this result discussed in class is that the salesperson doesn’t scrutinize the leads enough during the qualifying stage, and consequently, pursues leads he/she shouldn’t. This explanation is supported by the data indicating none of the leads generated by the advertising campaign were rejected at the Lead stage.

<table>
<thead>
<tr>
<th>Lead Gen Method</th>
<th>Lead</th>
<th>Qualified</th>
<th>Need Discovery</th>
<th>Proposal</th>
<th>Negotiation</th>
<th>Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>25.56%</td>
<td>8.89%</td>
<td>6.67%</td>
<td>1.11%</td>
<td>0.00%</td>
<td>1.11%</td>
</tr>
<tr>
<td>Tradeshow</td>
<td>1.11%</td>
<td>0.00%</td>
<td>4.44%</td>
<td>1.11%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Advertising</td>
<td>0.00%</td>
<td>4.44%</td>
<td>32.22%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>2.22%</td>
</tr>
<tr>
<td>Referral</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>11.11%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>26.67%</td>
<td>13.33%</td>
<td>43.33%</td>
<td>2.22%</td>
<td>11.11%</td>
<td>3.33%</td>
</tr>
</tbody>
</table>

A second issue discussed is the relatively high percentage of rejected leads generated by the Social Media lead generation method. Students discuss a variety of possible explanations, including that it may be on par with that of the Advertising method had the salesperson been more rigorous in screening those (advertising) leads. The relatively low initial rejection rate of leads generated by the tradeshow and through referrals isn’t unexpected given the selectivity of those particular methods.

A third issue discussed is the relatively high percentage of prospects generated by referrals that are lost during the negotiation stage. Given that none of the prospects produced by the other lead gen methods were lost during negotiation, it’s possible that the buyer, the seller, or both had unrealistic expectations going into the negotiation as a result of the lead being a referral.

Regardless of which Table 3 results (or combination of results) are discussed, students quickly understand that the additional analysis provides much greater insight into the salesperson’s performance than simply examining the close ratio.

**STEP3—“FREELANCE” SALES PERFORMANCE ANALYSIS**

Armed with the ability to use Excel functions and Pivot Tables, students are tasked with analyzing the sales data as they see fit, and then provide an insightful review of the salesperson’s performance. Students pursue a variety of analyses including:

- Sales revenue by product
- Sales revenue by product by lead gen method
- Time spent (measured by “number of sales calls”) by product
- Time spent by customer
- Sales revenue by customer
- Sales revenue per call by customer
- Sales revenue per call by product
- Sales revenue per call by lead gen method
- Commission by product
- Commission by product by lead gen method
- Commission by customer

As students progress through this step, their confidence and ability to use Excel increases significantly. The key take-aways from this exercise are 1) the ability
to use Excel as tool to analyze sales data and more
readily identify specific opportunities to improve sales
performance, and 2) the notion that the richest story
data have to tell may be discovered only by asking the
right questions.

MATERIALS AND BUDGET

The only materials needed for this learning module
are Excel, a set of Excel worksheets that contain sales
data, and preferably a classroom that provides students
access to computers and an LCD (or similar) projector
for the instructor. Assuming the computer equipment
and software are supplied by the university, the budget
for this learning module is zero.

RESULTS

An overwhelming majority of the students we’ve worked
with over the past few years tend to over-estimate their
understanding of Excel. Shortly after introduction of
the learning module and related assignments, students
quickly discover they aren’t as Excel-capable as they
thought. Progression through the learning module is
rough, and maintaining pressure on the students to
grasp the concepts is essential. Despite what seems like
reluctance to learn, most students walk away with at
least a familiarity with Excel and sales analytics, and
many leave with new capabilities in that area. The real
indication of the effectiveness of this learning module
is feedback from graduates who are in their first or
second year of their sales careers. Below are samples
of feedback we received from some of those graduates.

“Thanks to all my involvement in the sales program
and being able to take all the sales curriculum I
felt I was light years ahead of the other Regional
Managers, even if I was just a rookie. As much as
I cursed excel, I’m now learning to love it! YES,
YOU HEARD ME SAY THAT. “

“Just wanted to shoot you a quick note...currently
using VLOOKUP to pull linearity data to break
down numbers for the year on a Monthly/Quarterly
basis. Amazing how great it actually works when I
get the formula right.”

“When taking that class you said we would use
Excel in our sales jobs post graduation. I agreed
with what you said and thought I might use it a
little. I was wrong. I use Excel everyday in helping
me manage, calculate and estimate information for
my sales territory. Being taught this information in
college put me a step ahead of all of my co-workers
as they did not know how to use these forumulas
in Excel.”

“I just wanted to drop you a note saying THANK
YOU for teaching me how to effectively use excel.
Although I constantly found myself struggling with
the numerous different aspects of excel while in
your class, one year later I can honestly say that
it paid off. I am the youngest sales rep by about
20 years at the station, and I find myself using the
tips and tricks I learned in your class every day.
Better yet, I watch EVERY other rep struggle, and
find myself teaching them the ropes. My assistance
to the other reps has earned me 4 free lunches next
week . . .”

CHALLENGES

The primary challenges with respect to successfully
implementing this learning module is gaining students’
commitment to learning how to use Excel as sales
analytics tool, and motivating them to develop their own
analyses of the data. Student commitment is difficult
because students often perceive Excel as difficult to
learn. The reality is that Excel is not difficult to learn,
but it requires significant practice. Students who do
not work on Excel outside of class are far less likely
to acquire the skills necessary to use Excel as a sales
analytics tool.

Students who do take the time to learn Excel sometime
have trouble when it comes to freelancing the sales
performance analysis. They are quick to learn the
assigned KPIs, but struggle to identify new ways
to analyze the sales data. Students need to develop a
conceptual understanding of the functions and Pivot
Table tools so that they are better able to apply them in
new situations.

A secondary challenge is finding or creating the data to
be used in the exercises. If a real data set from a sales
organization isn’t readily available, the instructor will
need to create a data set. At least two different data sets
are useful – one reflecting a single salesperson’s territory for a given time frame, and one reflecting a team (e.g., district or region) of salespeople. The first salesperson data set is useful for helping students understand the types of analyses they might do in their first jobs. The sales team data set is useful for helping students better understand the types of analyses sales managers may be doing to improve sales team performance.

As the availability of sales and marketing related data continues to increase, there will be increasing pressure on salespeople to be able to analyze the data in order to improve performance or otherwise gain an advantage over their competition. Consequently, analytical skill development is becoming an increasingly important component of salesperson training and professional development. Learning modules such as the one describe here serve to address that issue.

REFERENCES

