Demystifying Microsoft Excel: Put Pivot Tables and Related Features in Your Students' Spreadsheet Toolbox

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Why Such Focus on Excel

- Industry needs it
- Many teachers don't like getting into the heavy stuff
- Students don't think it is fun and exciting

- Numeracy across the curriculum
- Moving students from crunching numbers to analyzing and manipulating data

Skills Business and Industry Says Employees Need

- Pivot Tables
- Advanced Sorting and Filtering
- Conditional Formatting
- Macros
- Functions
- What-if Analysis and Goal Seek

So, what the heck is a pivot table???

- A **pivot table** is a program tool that allows you to reorganize and summarize selected columns and rows of data in a spreadsheet or database **table** to obtain a desired report. A **pivot table** doesn't actually change the spreadsheet or database itself. – *TechTarget*

- Use a **pivot table** report to summarize, analyze, explore, and present summary data. Use a PivotChart report to visualize that summary data in a PivotTable report, and to easily see comparisons, patterns, and trends. A PivotTable report enables you to make informed decisions about critical data in your enterprise. -- *Microsoft Office Online*
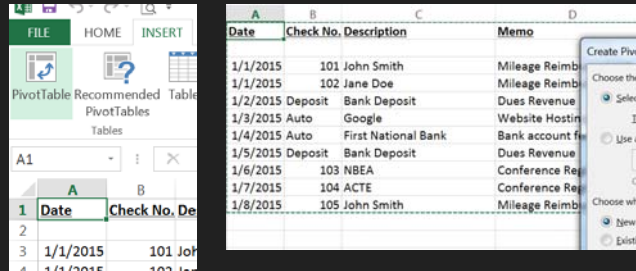
Be a show-off!

○ Show how powerful pivot tables can be

○ Discuss relevant examples and their uses

○ Put pivot tables in your student's academic vocabulary

Step #1 – Worksheet Data

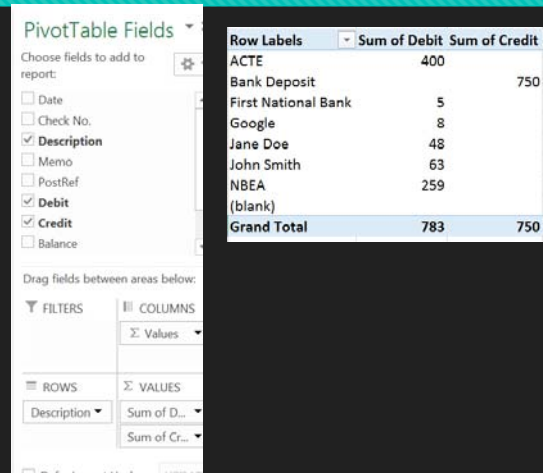| Date	Check No.	Description	Memo	PostRef	Debit	Credit	Balance	Acct No.
							$ 1,000.00	
1/1/2015	101	John Smith	Mileage Reimbursement		$ 51.00		$ 949.00	115
1/1/2015	102	Jane Doe	Mileage Reimbursement		$ 48.00		$ 901.00	115
1/2/2015	Deposit	Bank Deposit	Dues Revenue			$ 550.00	$ 1,451.00	201
1/3/2015	Auto	Google	Website Hosting Fee		$ 8.00		$ 1,443.00	120
1/4/2015	Auto	First National Bank	Bank account fee		$ 5.00		$ 1,438.00	130
1/5/2015	Deposit	Bank Deposit	Dues Revenue			$ 200.00	$ 1,638.00	201
1/6/2015	103	NBEA	Conference Registration		$ 259.00		$ 1,379.00	140
1/7/2015	104	ACTE	Conference Registration		$ 400.00		$ 979.00	140

Step 2 – Insert a Pivot Table

- Insert, Pivot Table
  - Make sure data range is selected (Notice the flashing selection area)
  - Select placement of pivot table (new or existing worksheet)

Step 3 – Manipulate Your Pivot Table

- Know how you want your information reported
  - This requires experimentation
- Placing data in rows vs. columns will give your data a very different look, feel, and function
  - Ask yourself – What do you want your data to say and what is the most important column?

Basic tips and tricks

- Expand your initial selection area, should you want to add more data later.
- If your pivot table tools disappear, click inside of your pivot table data area.
- Values default to <u>COUNT</u>. This can be tricky if you deal with financials – you will need to change field settings to <u>SUM</u>.
- Refresh pivot table data after you add any new information.
  - Do this from your pivot area, click <u>DATA</u> and <u>REFRESH</u>.
  - If data doesn't refresh, double check your selection area within your input worksheet (<u>CHANGE DATA SOURCE</u>)

Need more help

- Excel Pivot Table Tutorial (from Vitamin CM) – https://www.youtube.com/watch?v=Vx-Fuw46VbY
- How to Create an Interactive Excel Pivot Chart (from Danny Rocks) -- https://www.youtube.com/watch?v=kQK_bvuEeqM
- Working with Pivot Tables in Excel 2013 (from Simon Sez IT – Multiple parts and videos available) -- https://www.youtube.com/watch?v=8ffdXfriLPQ
- VLOOKUP Excel 2010 (from Mathew Pous) - https://www.youtube.com/watch?v=x0D0ksSVczU

Connecting to the Business Classroom - Accounting

Date	Description	Acct No.	Debit	Credit	Source Doc .
10/1/2014	Cash in Bank	101	$ 25,000.00		Memo 1
10/1/2014	Maria Sanchez, Capital	301		$ 25,000.00	Memo 1
10/2/2014	Office Equipment	120	$ 400.00		Memo 2
10/2/2014	Maria Sanchez, Capital	301		$ 400.00	Memo 2
10/4/2014	Computer Equipment	115	$ 3,000.00		Check 101
10/4/2014	Cash in Bank	101		$ 3,000.00	Check 101

Row Labels	Sum of Debit	Sum of Credit	Account Balance
101	25000	3000	$ 22,000.00
Cash in Bank	25000	3000	
10/1/2014	25000		
Memo 1	25000		
10/4/2014		3000	
Check 101		3000	
115	3000		$ 3,000.00
Computer Equipment	3000		
10/4/2014	3000		
Check 101	3000		
120	400		$ 400.00
Office Equipment	400		
10/2/2014	400		
Memo 2	400		
301		25400	
Maria Sanchez, Capital		25400	
10/1/2014		25000	
Memo 1		25000	
10/2/2014		400	
Memo 2		400	
(blank)			
(blank)			
(blank)			
(blank)			

- Changes Journalizing and Posting
- Students journalize their transactions into an Excel workbook
- Students create a pivot table that sorts their data into given accounts

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Connection to the Business Classroom – Personal Finance

Type	Date	Description	Post	Debit/Amt. Spent	Credit/Deposit	Acct Balance	Budget Category
	7/1/2014	Balance Forward				$ 800.00	
	581	7/1/2014 Food Mart		$ 36.12		$ 763.88	Grocery
Deposit		7/15/2014 Payroll Deposit			$ 950.50	$ 1,714.38	Target Paycheck
ATM		7/16/2014 ATM Withdrawal - 132nd & Maple		$ 20.00		$ 1,694.38	Entertainment
	582	7/20/2014 Grandview Apartments		$ 600.00		$ 1,094.38	Rent

Over/Under	Row Labels	Sum of Debit/Amt. Spent	Sum of Credit/Deposit
$ 42.50	Automotive	$ 357.50	
$ 55.00	Entertainment	$ 20.00	
$ 118.83	Grocery	$ 81.17	
$ -	Rent	$ 600.00	
$ 100.00	Savings	$ 500.00	
$ 1.00	Target Paycheck		$ 1,901.00
$ 42.15	Utility	$ 157.85	
	(blank)		
$ 3,617.50	Grand Total	$ 1,716.52	$ 1,901.00

- Checking Accounts and Budgeting
- Students enter bank account transactions into a check book register
- Teacher models pivot table set-up, sorting by accounts or vendors
- Students could do this with actual finances and reflect on expenditures

Connection to the Business Classroom - Marketing

- Concept – Market research
- Students download actual Arbitron radio market share ratings and insert them into an Excel worksheet
- Students create a pivot table for analysis of actual market data
- This data could drive class discussions on when and where a company may choose to advertise

KXKT-FM	Country	9.3	Omaha
KFKF-FM	Country	7.2	Kansas City
WDAF-FM	Country	4.3	Kansas City
KBEQ-FM	Country	3.9	Kansas City
KCMO-FM HD2	Country	0.1	Kansas City
KYGO-FM	Country	5.2	Denver
KWOF-FM	Country	2.5	Denver
WSM-FM	Country	5.6	Nashville
WKDF-FM	Country	5.2	Nashville
WSIX-FM	Country	4	Nashville
WUSN-FM	Country	4.1	Chicago
WCCQ-FM	Country	0.6	Chicago

Country	
0.1	Kansas City
0.6	Chicago
2.5	Denver
3.9	Kansas City
4	Nashville
4.1	Chicago
4.3	Kansas City
5.2	Denver
5.6	Nashville
7.2	Kansas City
9.3	Omaha

Other Excel Features

- V-Lookup
- Conditional Formatting
- What-if Analysis

Take-aways

- Tip sheet for creating a pivot table
- Examples discussed are provided for you
  - Lesson plans and working spreadsheet with pivot table inserted
  - All lesson plans aligned to NBEA Standards and a referenced textbook
- All items provided to NBEA for input on flashdrive

Thank you!

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