



Transcript for Session 050

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Transcript:

Hello and welcome to <http://chandoo.org> podcast. This is session number 50. We are at the half century point of our podcast. Thank you so much for supporting <http://chandoo.org> podcast for the past 20 months. It has been a pleasure hosting this podcast and I am hoping to run this show for the next 50, 100 or how many ever episodes I can.

For the 50th episode, I have got something really special, awesome and informative. We are going to learn about **50 Excel tips**.

It is obviously going to be a challenge because when you are listening to these tips, you might feel like you need to go and practice them. So, there is a little chance that you may not remember all of this. But, I've got you covered there as well. Once you finish listening to this podcast, head over to <http://chandoo.org/session50/> where I am going to provide a full transcript as a start. Very soon, maybe in the week following this podcast, I will be uploading a holiday gift for all our readers including the podcast listeners entitled '**50 Excel Tips**'. It is a **book version of this podcast** that you can also download and use as a **companion guide**. The book would probably contain some links, information, screenshots etc. To be honest, I haven't really started working on the book part. I am really excited about getting the podcast out first. Then, I will spend some time this weekend and early next week finishing up that book. It will be a free holiday gift for you. All you've got to do is visit <http://chandoo.org/session50/> where you can grab this book.

With that, I want to get into the show formalities. Before we even jump into the 50 Excel tips, I want to take a moment and really thank you for staying with me and listening to all these episodes and sharing your beautiful, awesome feedback. As of the date on which I am recording (3 December), we have 5-star ratings on iTunes. Around 39 people have reviewed our podcast and almost all of them have the nicest things to say about <http://chandoo.org> podcast. Thank you so much. I am really happy that you are enjoying this.

Whenever I meet people either through email or face to face at conferences or meet ups, people have been telling me for the past one year or so that they have been enjoying the podcast and it has been the



primary point through which they are now enjoying all our awesome content. So, thank you so much for all your love. If you have a minute at the end of this podcast, please open up your iTunes app on your phone and drop a review for our podcast. If you listening to this on an Android or Windows phone, you could also do the same, and review this podcast. More than your reviews, I would really appreciate if you can take a minute and tell a colleague, friend, spouse or somebody who could use this podcast. This kind of information is really useful for anybody working with Excel for more than 30 minutes in a week. I am sure you would agree with me. If you know somebody who could use this podcast, pass it along to them and make them awesome. Thank you so much.

Now, let's talk about the 50 Excel tips. Excel probably has thousands of tips out there, and many books have been written. At my website <http://chandoo.org>, I have written more than 1000 articles about various techniques, tips and ideas of using Excel. So, which 50 tips are we going to talk about?

Even before jumping into listing the tips, I drew a mind map because I wanted to structure these tips into easily memorable areas of easy categories. So, I narrowed it down to **5 categories** because we are talking about these in a podcast audio environment where not everything is graphic and I would have to do a lot of description to explain some things whereas a small image, video or screenshot would do justice to it on a blog post format. But, because it is an audio thing, I have to pick and choose the tips that would work best for an audio environment. So, I've chosen 5 areas of Excel and we are going to talk about 10 tips in each of those areas. Hopefully, you will find this useful. You would remember maybe 10% of the tips. If you remember more that's even better. My idea is to provide the content and hopefully you will revisit this podcast once in a while so that you could recollect a few more and add them to your toolkit.

The five areas of Excel which we are going to talk include **keyboard shortcuts** (**productivity** bucket), how to write **formulas**, how to **structure your data and clean it up**, presentation or **charting**, and **general uses** of Excel. There are lots of things that are out there in Excel - how do you use the ideas or tips that can open up new opportunities or new ways of working with Excel for you. Those are the five buckets - shortcuts, formulas, data, charting and general usage of Excel. We will learn 10 tips in each of those 5 areas, and that's how you will get 50 Excel tips.

Let's jump into the first area which is **keyboard shortcuts**. As you can guess, there are 10 tips in this. To make it even better and easy for you to memorize this, I have arranged these shortcuts in a simple way. The very first shortcut is **Ctrl+1**. I have talked about this shortcut quite a few times in the podcast as well as on the blog. Anybody who has attended my live training classes in a conference might recollect that I often talk about Ctrl+1 because it is such a simple, versatile and powerful shortcut. And, it is such an easy one to remember. Ctrl+1 is the first shortcut that comes to mind since it contains the number 1. What does it do? It lets you format things. Let's say that you have selected a cell and you press Ctrl+1, the Format Cells box opens up. You could do a lot of things from that box. You could set up the number



formatting code for the cell, borders, colors etc. Likewise, if you are formatting a chart, you can select the axis, series, label, title or the entire chart itself, and press Ctrl+1, it activates your Format Chart area, and you could do a lot of things from there. The same applies for your drawing shapes or anything else that can be formatted in Excel. Just select it and press Ctrl+1. It is a versatile shortcut. It is one shortcut that can do the formatting for you no matter what context it is. Ctrl+1 is the first shortcut.

The second shortcut is **F2**. F2 is a very simple shortcut that lets you edit a cell. When you have a cell with a formula and you just want to edit the formula, all you have to do is select the cell and press F2 and you will instantly go into editing mode, and your cursor will be at the end of the cell so that you can change the formula. This is a very powerful shortcut in the sense that you can avoid touching the mouse and do a lot of things with the keyboard itself. I see people doing this many times. They use the mouse to navigate to a cell, and double-click on the cell so that they can edit it. Then, they switch the focus to the keyboard and start typing. This can take anywhere between a fraction of a second to a couple of seconds. If you are doing this a lot then, in the long run, you are talking about hours and days of time wasted just switching between the keyboard and mouse. With the simple F2 shortcut, all you have to do is use the arrow keys to navigate and press F2, and you are editing the cell without even touching the mouse. So, it is a powerful one and it is a shortcut that all the Excel pros are using all the time.

The third shortcut is **F3**. It will let you access all the names that you have set up in your workbook. If you are creating a formula, or if you are dealing with a large, complex workbook and there are lots of named ranges, and you want to access a particular name for a purpose to input that name in a formula or use that name in the context of a conditional formatting rule or data validation rule, all you have to do is press F3 and the Names box shows up, and you can select one of the names and press OK, and that name will be entered into the formula. F3 is your Names access box.

The fourth shortcut is **F4**. This is, again, a versatile shortcut. It has two functionalities. When you are typing a formula and when you are typing a reference like A1+B1 and you want to change that entire reference to an absolute reference, i.e. \$A\$1+\$B\$1, you don't have to type the \$ signs. You can select the entire formula's text using Shift and arrow keys and press F4, and the \$ signs will be added for you. You can keep on pressing F4, and each time you press, it will switch the \$ structure. It will add an absolute reference, then make it a mixed reference, switch to relative reference, and then circle through all the four options. F4 is a shortcut that can be used to add those \$ signs to formulas, and make your formulas the way you want without holding the Shift key and pressing the 4 key to get the \$ symbol and all that.

The fifth shortcut is **Ctrl+5**. This is something that not many people know about. Let's say that you have some text in Excel - numbers or something - and you want to strike them out so that they get some visual attention saying that this number is no longer applicable or this text is striked off or whatever. How do you set up striked text? You can format it as bold, italic or underlined, but how do you strike?



You can do that - all you have to do is select the cell and press Ctrl +5 - and a strikethrough line will appear through the cell contents. You can also do this through the Format Cells box but Ctrl+5 is a shortcut and faster way to get there.

The next five shortcuts are not going to follow the same pattern because it is tricky to follow that pattern and talk about useful shortcuts.

The sixth shortcut is the **Tab** key. Tabbing is a very powerful way to use the built-in auto complete features of Excel. Let's say that you are typing a formula like SUMPRODUCT, all you have to do is type the first 4 letters (SUMP) and that narrows down the formula to SUMPRODUCT. Once the auto-suggest list highlights the formula that you want, you just press Tab, and it will auto-complete the formula for you. Using the Tab key is a powerful way to use the auto-complete feature both in Excel as well as in VBA when you are developing Visual Basic code.

The seventh shortcut is **Ctrl+T**. T stands for table. Whenever you have lots of data in Excel, using tables is a powerful way. We are going to talk about tables in the context of the data section of this tips podcast as well. When you want to create a table, all you have to do is select any one cell in your data, and press Ctrl+T, and it will create a table.

The eighth shortcut is the **Alt** key. Maybe it is my accent, but in a class, conference or live session, whenever I tell people to press the Alt key, most of them are confused. They keep thinking what it is. The ALT key on your keyboard when pressed instantly activates the built-in help shortcuts in Excel. This is available since 2007. In 2003, there is no ribbon, so you can still press the Alt key but the functionality is slightly different. When you press Alt in Excel 2007, 2010, 2013 or 2016, it will show small letters if you just press it for a fraction of a second and leave the key, it will show small boxes all over the ribbon. For example, if you press H, it will take you to the Home ribbon. If you press I, it will take you to the Insert ribbon, and so on and so forth. Using the Alt key, all you have to do is press that single key and you can then use the on screen help bubbles or boxes to navigate everything that is available in Excel. You don't even have to touch your mouse. Everything on the ribbon can be accessed with the Alt key.

The ninth shortcut is **F9**. This is useful for those of you building any kinds of workbooks where some formulas are employed. F9 can be used to calculate a workbook, i.e., in general, the entire worksheet will be calculated. And, when you are editing a single formula - you are typing the formula or you are editing the formula, and you want to find out why it is not producing the results that you want, you can select a portion of the formula and debug it. Let's say that it is a complex, nested formula with multiple formulas one inside another, you can select any one of those formulas completely and press F9 to see the result of that portion in context to that formula so that you can debug it, i.e. figure out where it went wrong, why it's not working or whether it is working the way it is supposed to be or not.



The tenth shortcut is my favorite and it is the one that I highly recommend you use. Many people know this but not many people use it frequently. It is **Ctrl+S**. S stands for save. Whenever you are building an Excel workbook and it has more than 7 cells, you have to remember that you have to save this workbook quite often because you don't want to lose your work and go and build it again. That's not awesome. So, Ctrl+S is for saving. Save your files every now and then. We will also learn some ways to do this better in the follow up section of this podcast.

There are your ten keyboard shortcuts. I am not going to do a recap as that will make this podcast really long, and I want to keep it at less than 50 minutes, if possible.

The next section is **Excel formulas**. Now that you have learnt ten Excel shortcuts, I am going to very quickly talk about ten formulas that you should be very comfortable with if you want to be awesome in data analysis or Excel.

The very first formula is **COUNTA**. All of us know about the COUNT formula. It counts the values in a cell. But, do you know that the COUNT formula only counts numbers? That's right. If a range has some text values and some logical values and some other stuff and some numbers, the COUNT formula only counts the numbers. It doesn't count anything else. What if you just want to count everything? In that case, you can use COUNTA. COUNTA stands for count all and it counts everything in the list or range that you provide. So, COUNTA is a formula that not many people know about and so I thought it is a good one to start our formula bucket with.

The second formula is your Boolean logical formulas – **AND & OR** etc. Especially when you are writing a complex business rule or something like that, not many people know how to express conditions that are complex. For example, everybody knows how to say age less than 80. But, do you know how to write a condition that will check for age less than 80, male gender and not married. How would you write a formula to check that condition? This is where you need to be familiar with two formulas - AND & OR. There are also other formulas like NOT, XOR, etc. but those can be easily constructed once you have the basics right. If you want to learn more about these formulas, I highly recommend that you visit the show notes page of this podcast's session - <http://chandoo.org/session50/> - where I am going to provide a link to another podcast where we talked a lot about how to set up business rules and business conditions using AND & OR formulas in Excel.

The third formula is the **CHOOSE** formula. This is again something that not many people are familiar with or not many people have used well enough especially when you have an IF formula. It is easy to write an IF formula. You can set up a condition and tell Excel what you want for true and what you want for false,



but, in many real life situations, the IF conditions are not so simple. You may have multiple IF's like the branches of a tree, and many people come up with these deep nested IF formulas. They can get really long and clumsy, and maintaining them is hard. Anybody new looking at that formula will completely freak out. This is where the CHOOSE formula comes into the picture. The CHOOSE formula is basically like selecting one of the n different outcomes based on the input value. So, you can say CHOOSE 5 and then pass on 7 parameters, and it will select the fifth parameter because you asked it to choose 5. Likewise, you can specify to choose 3, and provide 35 parameters, and it will select the 3rd one since you said 3. So, the CHOOSE formula is a powerful way to set up this kind of branching logic in your workbooks and keep the formula tight and simple. Of course, we also have the INDEX formula that does this in a more elegant manner. But, I find that the CHOOSE formula is pretty unique and very powerful. Again, in the show notes page, I am going to link to an article that I wrote a while ago called CHOOSE ME. You'll find more information, use cases, and scenarios for the CHOOSE formula in that article.

The fourth formula is the **SUMIFS** formula. I cannot stress how important it is to learn and use the SUMIFS formula better. I find that for most of the advanced Excel stuff that I do, both in my personal life as a blogger, author and podcaster, as well as in my professional life where I go and train people in conferences or live classes, I find that about 95% of the time we are simply writing a variation of the SUMIFS formula. 95% might be a bit of exaggeration but you get the point. SUMIFS formula is like this core building block of almost all the dashboards and complex workbooks that I build these days. It is such a powerful, versatile, Swiss army knife kind of formula that you can use. You have to learn how to use this and it is really powerful. Now, you might be wondering why I'm not telling you how to use it. But, again, I believe that talking about the SUMIFS formula and how to use it in different ways can stretch this podcast further. So, I am going to just plant the idea in your mind, and I am going to recommend visiting <http://chandoo.org/session50/> where you will find some additional resources on the SUMIFS formula. Also, when you download the 50 Excel Tips PDF book when it eventually becomes available next week, there will be a dedicated chapter on the SUMIFS formula for you to learn more from.

The fifth formula is the **SUBTOTAL** formula. This is very interesting again. Many times you are writing your SUM and COUNT formulas and it will count, sum or average everything. What if you only want to sum the values that are visible, i.e. you have applied some filters and some values are hidden and you don't want to sum them up. How would you do that? This is where the SUBTOTAL formula comes into the picture. It could be used for sum, count, average etc. It will do all of that only on the visible cells. There is also a different variation of this formula called AGGREGATE. It does the same thing but it also gives you more power. No matter whether you are using SUBTOTAL or AGGREGATE, they both give you the flexibility to talk to only the visible cells, and that is a really powerful way to narrow down the data that you would be analyzing in a report or dashboard. Again, as you can probably guess, on <http://chandoo.org> we have an article that talks about the SUBTOTAL formula and showcases 5 awesome cases for it. Again, you can find the link on the show notes page of this podcast.



The sixth one is **LEN** formula. LEN is short for length. We can use the LEN formula to find the length of any text. This is the starting point of text analysis in Excel. There are many other powerful formulas out there but I thought most of them will boil down to using the LEN formula into one point of the structure so that you could narrow down or analyze the text the way you want. So, the LEN formula is a really good one to start with especially if you have never done any text analysis in Excel.

The seventh formula is the **FIND** formula. Think of the FIND formula as a VLOOKUP but for text values inside one cell. So, if I want to find out if a particular brand name is present in a particular product name that I have in a cell. How would I do that? You would ask to FIND the brand name and point to the cell name. If it finds the brand name in the name of the product, it will tell you the position of the cell at which the name is found. If it cannot find the value, it will return an error just like the VLOOKUP formula which will return an error when it cannot find what you are looking for. So, the FIND formula is a powerful way to find out whether a particular text that you are looking for is inside the text or not.

The eighth one is **SMALL & LARGE**. The formulas section of this podcast is probably going to be a little more intense. I am not going to go into too many details here. I am just going to plant some ideas that you can later on use whenever you have a situation, or at least have a vague idea about what these formulas are and later on look up and do some further research on <http://chandoo.org>, or through Google etc. These are more powerful cousins of your MIN and MAX formulas. What would MIN and MAX formulas do? They give you the minimum or maximum of a list of items. But, what if I want to find out what the third lowest item in my list is or what the seventh highest item in my list is. In such cases, we cannot use MIN or MAX because they always give you the lowest item and not the third lowest item and so on and so forth. This is where you can use the SMALL formula. You can SMALL(list, 3) and it will give you the 3rd smallest number. Likewise, the LARGE formula can be used to get the 6th largest number or the 2nd largest number or whatever. That's how these formulas are useful.

You might be thinking that this is all good but how can you incorporate this into your reporting or dashboards. For example, in many dashboards, it is quite common to show only the top 5 values, and not all the billion values that you have. So, you could use your LARGE formula to get only those top 5 values. You would use 5 LARGE formulas and bring those values and show them on the dashboard.

Likewise, many times when you are creating a dashboard or a chart, your boss might ask you to sort the data. But, to sort the chart, you have to actually sort your original data, and that might mess up some other things that you have set up in place. So, would it be better if you could sort the data through a formula automatically. In such cases, you can use SMALL and LARGE formulas because they are essentially sorting the data for you. They will give you the first position value, the second position value and the third position value and so on and so forth. So, you could use your SMALL and LARGE formulas to pretty much interactively sort your data.



The ninth tip that I have for you in the formulas section are **wildcards**. There are two wildcards in Excel - * and ?. What do they do? Essentially, the ? symbol will match any one character whereas the * symbol will match any text of any length. Now, it might be a little tricky to visualize what these do and how they will help you in the context of an audio only podcast. But, remember that there are two wildcards - * and ? - I highly recommend that you visit the show notes page where you will find some useful links that talk a little bit more about these wildcards and how you can use them through various articles and tutorials and example workbooks. So, go to <http://chandoo.org/session50/> for more about wildcards.

The last tip that I have for you in the formulas section is using the **IFERROR** formula. What does this do? It is very simple. Whenever you have built a formula like your FIND formula or your VLOOKUP formula, or MAX, MIN, SMALL, LARGE or whatever, all of those have a potential to return an error if something in your data or setup or something else is going wrong. Maybe you want to know those errors at the point of development. But, when it comes to presentation or showing them to your boss, your boss couldn't care about a #NAME? error or #/N/A! or #REF! error. She would not like to see those in a board room presentation. IFERROR is a powerful way to suppress those errors and show some simple elegant stuff like blanks or zeroes or some other stuff like 'no values available' as a text message. Using IFERROR is a powerful way to mask any underlying errors in your workbook. That doesn't mean that you are ignoring those errors. You just don't want to show them in the output but you would still worry about them as a developer or an analyst or somebody who is putting together a workbook and go back to them and fix them at a later point. Or, at least you know that there is an error happening here and you can figure out why it is going on like that.

Those are the ten tips in the formulas section. Essentially, we talked about ten different formulas. I am going to do a very quick recap here because the formulas section is a little richer and there are lots of powerful ideas there. We talked about COUNTA formula which can be used to count everything as opposed to counting only values. Then, we talked about AND & OR logical formulas that can be used to construct business rules and business conditions in your formulas. We talked about the CHOOSE formula as an alternative to nested IF formulas. We talked about the SUMIFS formula as the corner stone or one of founding blocks of any large analysis workbooks that you would be constructing. We talked about the SUBTOTAL formula as a way to sum up, count or average only the visible/filtered out data. Then, we talked about the LEN formula which is short for length to find out the length of a given text value. Then, we talked about the FIND formula which is similar to VLOOKUP but for values inside text. Then, we talked about SMALL and LARGE formulas which are more powerful versions of MIN and MAX formulas. Then, we talked about the wildcards (* and ?) which can be used to do some wildcard check-ups in Excel. Lastly, we talked about the IFERROR formula which is used to suppress errors in the output workbooks using an alternative message whenever the formula returns an error. Those are the ten tips in the formula bucket. That feels like a lot.



Now let's talk about how to set up your data and how to clean it up using ten tips in the **data section**. The first and foremost tip in the data section is to use **tables**. Try to set up any kind of raw input data that you are getting into Excel. Tables are a natural structure and the data stays together. You can give a table a name and use structural references to access the tables. Tables are easy to create. All you have to do is press **Ctrl+T**. Tables can be imported from an external database connection, or even through a Power Query connection. In one word, Tables are awesome. Try to use them as much as possible for your input data needs.

The second tip that I have for you in the data section is that whenever you are importing data from a text file to Excel, try to use the **Text to Data feature** of Excel. It is a really powerful one. It can take a raw text data file and it can split the data into multiple columns, it can ignore a couple of columns, it can convert the formatting of columns for you and all that. Text to Columns is a powerful way and I often use this to clean up bad dates. Remember, when you are bringing external data into Excel, you would often notice that if there is any date column in the data, although it looks like a date, Excel won't treat it as a date. Excel thinks this is some other garbage and it creates problems for you. How would you deal with that? It is very simple. You can run it through Text to Columns and then tell the Text to Columns screen at the point of the date column that this is the date column in the format of mdy or dmy or ymd or whatever where the letters dmy stand for date, month and year. Excel will very deftly and in a very simple way convert the dates for you so that you don't have to deal with date problems anymore once the data is in Excel. So, Text to Columns is your best friend especially when you are dealing with data that is delimited by different symbols, and has some date formula issues.

The third one is the **Flash Fill** feature which has been introduced in Excel 2013. It is really like having data cleaning or data extraction power inside Excel. You don't have to write any formulas or anything; you can simply use Flash Fill. As soon as you do a little bit of typing, Excel tries to guess what you are trying to type, and it suggests automatic ways to fill the data for you. It won't be too intrusive and too dumb. It is really smart logic, and I have used Flash Fill many times to rapidly clean up data or extract portions of the data that I want. For example, let's say that you are looking at a bunch of email addresses and you just want to extract the name portion of the email address. Usually, the format of the email address is name@domain. So, you just want to get everything before the @ symbol. You could use some sort of formula to do that. But, why bother? Why not use the Flash Fill feature. Let's say that you have your original data in column A. In the first few cells of column B, type the names yourself. Then, Excel will take a guess and suggest the Flash Fill option for you. It will give you the option to fill up the rest of them, and when you press Enter, all of those other values will be extracted out for you. It is a powerful way to clean up the data or extract only a portion of the data that you want.

The fourth item in the data bucket is the **Remove Duplicates** button. This is a very powerful feature introduced in Excel 2007. As the name suggests, this removes the duplicates in your data. As you can guess, for all these tips that I am talking about here, there are detailed articles and tips available on



<http://chandoo.org>. I highly recommend that you visit the show notes page so that you can access some of these as well.

The fifth tip in the data bucket is the **Go To Special** feature of Excel. This is a very powerful feature. Using Go To Special, you can go to any type of cells that you want. You can highlight only the formula cells or all the blanks cells or all the cells containing text values and so on and so forth. So, when you have lots of data and you just want to narrow it down to those particular items of data that you care about, Go To Special is a powerful way. What if you want to highlight all the cells containing John or Smith or Jasmine etc. In such cases Go To Special won't help but you can use the **Find** feature of Excel. You can press **Ctrl+F**, type the word Jasmine and click the Find All button and it finds every cell where Jasmine has occurred, and you can select all those cells and do something like fill them up with yellow color or whatever else.

The sixth tip is **splitting text**. Of course, we talked about Flash Fill as a way to split text but there will be some scenarios where you can't use Flash Fill. Maybe you are using an earlier version of Excel or your data is not smooth and you have to split the text. In such cases you can use some simple **TEXT formulas** like the FIND, LEFT, MID, RIGHT formulas etc. so that you can split the text. I am only going to plant this idea; I am not going to give you the full detail here. But, if you go to <http://chandoo.org> and search for split text, you will find some really powerful articles and techniques that'll help you with how to do this.

The seventh one is **invalid dates**. Again, this is a common problem that we often deal with. Many times we end up with lots of invalid dates. Although they technically look like dates, they are not dates. The easiest way is to use '**Text to Columns**' feature but what if you can't use that? The data is coming to you in another way and you have to deal with this problem in a more automatic fashion rather than a manual way like Text to Columns. In such cases you can use formulas like **DATEVALUE** or **split formulas** to split the text into the date, month, and year portion, and then feed them to the DATE formula so that you can construct any date that you want.

The eighth tip that I have for you in the data section is **relationships**. This is a powerful feature used in Excel 2013 using which if you have multiple sets of data like sales, product, transaction and customer data, you can essentially construct a relationship between all of these tables. You can say that each transaction happens against a product, customer and store. So, it is basically your own version of a database inside Excel. Why do we even bother with relationships? It is because once we set up relationships, you can create powerful, integrated, pivot tables from the data using built-in features of Excel pivot tables. So, you no longer have to construct all these helper columns and build billions of VLOOKUPS. Instead, you can simply set up the relationships and let Excel do what it is best at which is analyzing data.



The ninth one is **pivot tables**. Once you have relationships, you can use pivot tables to come up with cross-linked pivot tables that can show you how many products are bought by female customers without even manually tying up those two tables. You can leave them where they are; you can simply connect them to the transaction table and set it up.

Some of these might be very tricky to visualize but I've got you covered. Go to the show notes page and find the relationships article and read it and you will find some useful information there.

The last tip that I have for you in the data section is to try to use **Power Query**. We talked about Power Query in a previous episode where Miguel Escobar talked about how to use Power Query and gave us a beautiful introduction to Power Query in the podcast. In case you want to listen to that episode, just scroll through the podcast episode list and find the Power Query episode and listen to it. I highly recommend it. Power Query is a powerful feature introduced in Excel 2010 as an add-in. It was called Data Explorer but later on it was renamed Power Query. In Excel 2016, it is called Get & Transform Data. It seems that Microsoft is going through a rough patch here; they keep changing the name. But, whatever may be the name, it is an awesome feature. Power Query can do a lot of powerful things to your data, and it will give you true power as an Analyst especially if you are dealing with lots of data from lots of different places and you are spending 60-70% or sometimes even 90% of the time just wrangling and wrestling with your data, you will find Power Query to be an awesome companion and it'll save a ton of time for you. So, go for it. At least try it. Even if you don't have lots of data, at least download it and, out of curiosity, see what it can do for you. I am sure you will be amazed and impressed.

There you go; these are the top ten tips for you in the data section.

The next area is **charting**. This is going to be really tricky because charts are visual by definition. So, talking about them in an audio podcast is going to be really tricky but I picked the tips that will work best for us in this format.

The very first tip that I have for you in the charting section is that instead of creating full blown charts, try to **come up with charts using some light-weight means**. For example, you can **use conditional formatting** and set up data bars or icon sets and things like that. These are really simple to set up and they don't take a lot of time and they provide a lot of bang for the buck. So, go for conditional formatting kind of visualizations whenever you are short on time or you want to showcase a lot of powerful insights in a little bit of space. You might not want to create 17 charts but you can create 17 data bars using one conditional formatting rule, and it looks elegant and well put together. There are also other light-weight exploration techniques for data. For example, you can use sparklines, the REPT



formula to create in-cell charts and all that. But, start with conditional formatting and then you will eventually discover other powerful ways to do this.

The second tip that I have for you in the charting area is **sparklines**. Many of us know sparklines as charts that go from left to right. So, if you have data, and you create a sparkline, it goes from left to right. But, do you know that you can also change the orientation of the sparkline. You can essentially tell the sparkline to go from right to left. This is a very powerful way especially if your original data is in one format. For example, if the dates are in the latest to oldest order, and you want to create a trendline chart which, by default, should be oldest to latest, you can flip the sparkline technically by using the axis options in the sparkline settings. Telling you which menu this is exactly going to be under is going to be very tricky and you probably won't even remember it. So, go to the show notes page on <http://chandoo.org/session50/> and you will find an article that talks about this particular sparklines feature.

The third one is that especially when you have sparklines in your workbooks, dashboard or report, and you have multiple sparklines and you want to do some formatting to them, you don't have to do them one at a time. You can select all the sparklines, and first **group them** using the sparklines Design ribbon, and then you can do all the formatting and settings in one go. If you do it for one sparkline, all other sparklines will change, for example, changing the line color or the high point and low point or axis minimum and maximum values and all of that. You do it once and every other sparkline will change because you essentially grouped them and now all the settings will apply to that group as against individual sparklines one at a time.

The fourth tip is that whenever you are **making a bar or column chart**, one of the recommended ways to do this is to **sort the original data** because then the bar chart will also be sorted and it looks more elegant and well put together that way. But, how do you sort this? The simplest way to do this is to sort the original data. When you sort the original data, the chart will also be sorted. Both the original data and the chart are really tight, close friends. If one of them changes, the other will change. So, sorting is a really simple way to provide more insight and power into your chart. Again, keep in mind that you can't sort every time. For example, if you are presenting date wise trends then you should use the sort order of dates and not values. Whereas if you are showing product sales by product then sorting by the sales amount as against the alphabetical order of the product name is probably better. So, **sorting charts by sorting data** is the tip for you.

The fifth one is to **mind the gap width**. What is gap width? Whenever you are creating a column or bar chart, you see how those columns are separated by that tiny bit of white space. Do you know that you can control how much that white space is? Well, you might be thinking that I am now I am pushing it really hard because why even bother about that white space? Well, to be frank, sometimes the white space might be too much and you don't want to give too much white space there because you want the



attention to be on the columns rather than on the white space. So, regulating the white space to be 50% of the chart area is really good. By default, Excel will set the white spacing or the gap width to be 217%. Who wants 217% of white space? That'll make the chart look too wide and the columns will be really tiny. So, by reducing the white space or the gap width, you are essentially widening your columns so that you get more space for the columns or bars. To do this, select the chart columns or bars and press Ctrl+1 which opens up the Format Series dialog pane on the right hand side. There, on one of those tabs, you will find the gap width option. Adjust it using the slider and set it to 50% or something like that. If you want the columns to be touching each other, you can set it to 0% and that'll also work.

The next one is **hiding 0's on the axis**. You know how the axis starts from 0 and then goes to 100, 200, 300 etc. Sometimes you may not want to see the 0 at the very bottom. How do you do that? Well, it is very simple. Select the axis, press Ctrl+1 to format the axis, go to the Number area of the axis and set up a custom cell formatting rule so that 0 can be omitted. How would you set it up? It is very simple. You would write a rule. Just go to the show notes page where I am going to link to an article that I wrote a while ago that talks about how to do this along with some other cool and nifty number formatting tricks.

The seventh one is **custom text in labels**. Starting with Excel 2013, you can add any text or any values to the labels. By default, if you set up data labels for your chart, they will be either the X value or the Y value or the value of the cell. But, do you know that you can set it to anything, for example, the names of products or competitor prices or previous year values or whatever? All you have to do is select the labels and press Ctrl+1 and then go to Options tab and click on the 'Value From Cells' button, select a range where your values and those values will be shown on top of the chart. This is a powerful way. What if you are using an earlier version of Excel? In this case you can either use a simple bit of VBA code to do this, or you can download an add-in called XY Chart Labeller by Rob Bevy and you can use this add-in to essentially mimic this feature in earlier versions of Excel. It'll do one-off things so once you save your file, your file will be a regular Excel file and not a macro-enabled file. But, it will contain mapping to those individual cells so that anybody else will also see those values.

The eighth tip is **custom labels with formulas**. You can also set up your labels for the chart by linking them to individual formulas. This is again a little tricky to visualize and understand so I would recommend that you visit the show notes page where I will link to the article. The following tip also uses a similar idea. Remember, charts usually have a default title like Chart1 etc. but those are no good. I recommend that you write a title that is descriptive. So, either type it yourself, or, if the title needs to be automatic (for example a title that says that Sales of Acme Inc. (2014-2015) are up by 75%) - the 'up by 75%' of the message will change depending on the data you have. It could be down 23% or up 3%. How would you automate the title? It is very simple. You construct the title in a cell using your regular TEXT formulas and then select the title and go the formula bar and press equal to and link it to the cell. That's it; you can link the title of the chart to any cell inside your workbook. That way the cell value will be displayed as the chart title. So, that's a tip for you.



The last tip that I have for you in this section is that **scatter plots are not scary**. Many people kind of shy away when they think about XY scatter plots. We are comfortable using bar charts, column charts, pie charts etc. But, do you know that scatter plots or XY plots provide ultimate amount of control and flexibility when it comes to charting in Excel. There are many powerful charts that you see on <http://chandoo.org> and all of them are created in a variation of XY scatter plots. So, I am just planting the idea here. The next time that you are creating some sort of chart or when you have some data try to come up with scatter plots and see what you can do because scatter plots provide you with a lot of control. You can control both the X values and the Y values and you can add any number of series and you can add error bars and lots of other things so that you can create any kind of picture that you want because you essentially have full control over the chart canvas.

These are your ten tips in the charting area.

We are in the last bucket which is **Using Excel**. There are lots of things that you can do when you are using Excel to improve your productivity, experience, and you'll save a lot of time. I am providing ten tips. There are many other things that you can do but these are some of my favorite.

The very first tip is that if you frequently use certain Excel files like your DBS reports or time sheets and you open these files a couple of times every day or every week, all you have to do is open up Excel, and, in the recently used files list, your file will be there. There will be a small pin icon next to the file name. Click on it and this will pin the file on the top of the list. So, that file is always visible there. In this way you can **pin the frequently used documents** on top and you can access them whenever you are inside Excel. You don't have to go and work with the File>Open dialog and go through all of that. You can pin your frequently used files to your File menu and save a bit of time there.

The second technique or tip that I have for you is that if you create certain types of files all the time, let's say like some sort of department report pivot table or some sort of bar chart or project plan all the time, try to **create a template** with bare minimum data and structure in place, and **save it as a template**. When you are saving the file, go to Save As and select the file type as Excel template. It will save the file in a special location. That way whenever you have to create another file of that, you simply go to New and then select the template as the file type and that'll create the new file as a template for you. To give you an example, on <http://chandoo.org>, I frequently share downloadable workbooks with our readers. Most of these downloadable files will have some sort of consistent format - there is a title on the top with a button that links to <http://chandoo.org>, and the font and spacing and everything is consistent, there are no gridlines, etc. I find that to do these basic steps every time that I want to upload a file to <http://chandoo.org> is going to kill a lot of time for me. So, I saved this as a template, and I use that



template so that I can focus more time on creating an awesome file rather than doing those tiny little formatting steps. So, using templates is a powerful way to save time.

The third one is to **customize the ribbon**. Each of us uses Excel in a different way. So, don't stick to the standard default ribbons that you have. If you are using Excel 2010 or above, you can create your own custom ribbons. So, go ahead and create your custom ribbon, and use it. If you have some doubts about the process and how to do this, visit <http://chandoo.org>. We have some articles and tutorials that talk about how to create custom ribbons in Excel.

The fourth one is the **Selection Pane** feature. This is something that not many people know. Let's say that you have five charts in Excel and you want to do some sort of thing to all the five charts in one go. How would you select all five charts? Of course you can select the first chart, hold down the Shift key and select the other four, but that might take a while. You can also activate the Selection Pane by going to the Find icon in the Home ribbon. There is a drop-down next to it. It'll show other options along with activating the Selection Pane. This will show a panel on the right-hand side that lists all the charts as individual line items. You can select all the five from there easily and do this. You can also select drawing shapes etc., group them, hide them, show them and do a lot of other things using the Selection Pane. The Selection Pane is a powerful way to deal with various objects that you have in the workbook. Think of this as Ctrl+down arrow or Ctrl+up arrow along with the Shift key that you use to select a bunch of cells. If I want to select 10 cells, I am not going to select one cell at a time. I am going to select the first cell, hold down the Shift key and press the down arrow so that it selects all the 10 cells. In the same way, you can use this technique of the Selection Pane to select all the charts or all the drawing shapes etc.

The fifth idea is **Alignment Tools**. Whenever you have a bunch of things like charts or drawing shapes or symbols or logos or pictures, you may want to align all of them in a certain way, for example to the same left axis or the top or spaced out equally etc. Doing this by hand can be very clumsy and it takes a lot of time. You can use the alignment tools that are part of the Page Layout ribbon as well as the Design ribbon when you activate any drawing shapes. So, you can select all the items using the Selection Pane, go to Page Layout, and use the Alignment Tools to set the alignment. You can center align all of them or you can space them out evenly etc. using the alignment tools.

The next tip that I have for you is **Styles**. You can use Styles so that your workbooks are consistent - all the input data is in one format, all the outputs are in one format, the headings are in a different color, the formulas are in a different color etc. Excel comes with lots of built-in styles. So, use them as a start. But, as you build more and more complex files, you can also create your own styles and use them. Styles are essentially useful in modelling and in industries where you deal with a lot of data and a lot of people are involved in the spreadsheet development process. In such cases, if we use Styles, everybody else will know what that means and they can also stick to it so that it follows a convention. So, using Styles is a



powerful way to save time and focus more time on the actual logic and rules rather than the nitty-gritties like fonts and colors.

The seventh one is **Format Painter**. In case you can't use Styles and you just want to copy the formatting from one place to another, for example, based on how a particular cell or chart looks, you want to format all other cells or charts like that. In such cases you can use Format Painter. All you have to do is select the source area, click on the Format painter icon on the Home ribbon, and select the target items one at a time so that the formatting gets copied.

The eighth tip is **using Print Areas**. This is very powerful and useful especially when you have a large workbook and you don't really want to print all of it. You may want to just print the reporting area of that workbook. You can set up a Print Area. Just select the range of cells that you want to print and go to the Page Layout ribbon and click on the Set Print Area button and that'll set the print area for you so that, when you print, only the range that you have selected will be printed. There is a previous podcast on <http://chandoo.org> where we talked a lot about printing. The podcast is titled 'Sexy on screen, ugly on print-out'. It talks about a lot of problems that you face when you are printing and how to use the print settings in Excel to overcome all of these problems. So, go ahead and listen to that in case you want to learn more about printing.

The ninth tip that I have for you is to **set up your Auto Save & recovery folders** in case you haven't already done it. Go to the File options screen in Excel and from the Save area of that screen, set up the Auto Save feature and select a folder where you would like the recovery files to be saved. This is going to save you a lot of time because Excel will automatically save every three minutes or five minutes and in case you lose power or in case something happens and your computer crashes, you don't have to start from scratch again.

The last tip that I have for you is that anything that you don't want to see in your workbook, especially in a report or something like that, use the **Hide Rows and Hide Columns** features to hide all of that. Let's say that your report is from A1 to S20, and then you don't want your boss to look at columns Z, AB and so on. Likewise, you don't want your boss to look at A75 because there is nothing there; you only have values up to A20. So, you could go to the 21st row, press Ctrl+Shift+down arrow which will select all the cells all the way down, and then press Ctrl+Shift+right arrow so this selects all the columns towards the right, and then hide them using the Hide Rows features. Repeat the same process for the columns from T onwards and all of those columns will also be hidden so that you have a more compact and tidy workbook and it looks better and everybody can focus only on those few columns and rows rather than looking at all the white space.

There you go; these are ten tips for using Excel.



I'll do a quick summary. We talked about ten keyboard shortcuts, ten formulas, ten tips for using data in Excel, ten tips for charts and concluded by talking about ten tips for using Excel. I know this is a lot to take in one podcast so I think it is fair to say that if not many of you are listening to it all the way through in one sitting, that's fine by me. But, if you are going on a long cycling trip or sitting in a commute where you can take some notes, this is probably going to be useful for you as well. No matter what your situation is, in case you are still listening please go to <http://chandoo.org/session50/> and access the show notes page for all the links and resources that'll help you with these 50 tips. Within a week or maximum ten days, I am going to share this beautiful PDF book that I am authoring that talks more about these 50 tips as a holiday gift for you.

Thank you so much for sticking with <http://chandoo.org> for all these 50 episodes. Here is to you and me wishing for many more fifties. Thank you so much; talk to you soon. Bye.