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BSc Degree

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English – 1 (Basic English)
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Consonant Clusters in English Words

Welcome to the class. Today we will look at one specific feature of English words. Rather, it is better to say we will look at one specific features of words and this feature is significant in English as well. We are going to talk about cluster of consonants in words, I will explain this to you. I will explain how it works but right at the outset I would like to draw your attention to the point that cluster happens in all languages of the world.

So, if you speak a language other than English you can check the language as well and see how these things are working in your language as well and that will make it simpler for you to learn about these things in English too. Please underline my words for that: cluster works in all languages of the world, in the language that you speak natively as well and an inbuilt knowledge about it from that language and your attention to that phenomena in your language will be very much useful for you to learn the things that we are going to discuss about English; its application of our subconscious knowledge in making a new effort of learning a new language rather something about a new language.

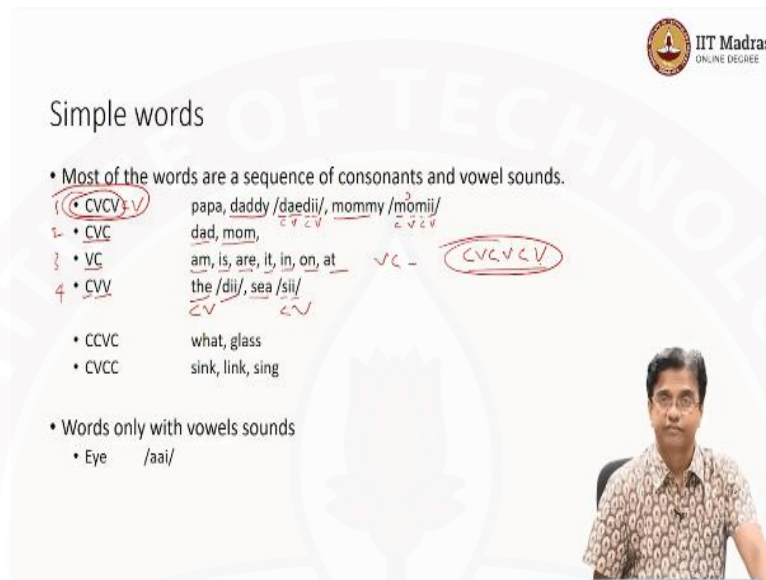
Let us look at how it works in English. So, as you have seen so far, we have had a fairly concise discussion on consonants and vowels. We know about these two types of sounds in language. We know that these two sounds combine together to make a word. No random sounds together make words. It has a specific sequence, as we know that a word in any language including English is not possible without a vowel sound. It is required for every word, rather, every syllable to have a vowel sound in it.

A syllable is a smaller unit of a word. It is larger than sounds but smaller than words. There are some words which are monosyllabic in nature, so in such words the question of syllables is not really very significant but in bigger words, larger words, words which have got more than one syllable, discussion on syllable is also important.

Sometimes words have just a sound, so we are not talking about those words. Rather, we are looking at conceptual discussion on such topics. Trust me on this, please go through

this discussion and it will have exponential impact on improving your language, improving how you speak and needless to say, once you improve how you speak it adds to your confidence and that results into impressive delivery in the target language, which is the larger goal of this program.

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Simple words

- Most of the words are a sequence of consonants and vowel sounds.
 - 1. • CVCV papa, daddy /daedii/, mommy /mómii/
 - 2. • CVC dad, mom,
 - 3. • VC am, is, are, it, in, on, at
 - 4. • CVV the /dii/, sea /sii/
 - CCVC what, glass
 - CCVC sink, link, sing
- Words only with vowels sounds
 - Eye /aai/

So, let us move on to a discussion on that. So, as we have started, we are going to be talking about consonants and vowels in a word. So, we will start with simple words. So words have a sequence of consonant and vowel and I want your attention on this particular slide specifically, because we are going to begin a discussion on consonant. First, we talked about consonants and vowels and then we want to see a step beyond, that is, how this sequence works.

So, look at this, we have simple words, simple combinations in this order that is CVCV order. What does this order mean? Consonant, Vowel, Consonant, Vowel rather alternations of these two types of sounds. We have huge number of words with this sequence and please also note that when I say CVCV, it can also be VCVC. So, the point is, one sound after the other, then again first then again second, that is the important part. So, a word like 'papa' is an example, I am not giving you kindergarten examples but to begin with it is important to go slow and you can come up with your own list of words with CVCV.

But wait for a moment before you do that because this exercise that you are going to do is going to be more interesting for you and I am positive you will enjoy this exercise no matter at what stage of learning language you are. So, 'papa' is a word. It has a sequence of consonant, vowel, consonant, vowel and I am purposely not putting these words in phonetic symbol because putting a word in phonetic symbol means we are going to be talking about how we speak.

So, now what, we do not want to load you with the knowledge of phonetic symbols. Rather, we simply want you to keep in mind that when we are talking about words, we are talking about how we speak a word, learning to write, that is learning spelling of a word is a completely different phenomenon and the things that we are going to underline, things that we are going to ask you to pay attention to are related to spoken part of the language.

Speak this word to yourself 'papa'. You are going to say it has sequence of two sounds 'pa' consonant, 'a' vowel, 'pa' consonant, 'a' vowel; four sounds in it 'pa', 'a', 'pa', 'a', 'papa'. So, please do not pay attention to spellings alone, pay attention to the sequence of sounds in which they occur. So, 'papa', 'daddy'. So what are the sounds here? Again four sounds 'da', 'a', as the vowel, 'da' again as a consonant and 'ii' long vowel at the end of the word. So four sounds, two vowels, two consonants, 'da', 'a', 'da', 'ii'. 'da' consonant 'a' vowel, 'da' consonant, 'ii' vowel. And this particular, I have tried to put it phonetic symbols so that you can see this is C, this is V, this is C and this is V.

So, first vowel, the second sound in this word is a diphthong vowel, and last vowel 'ii' is a is an example of long vowel. So, which becomes clearer when you look at the phonetic transcription of the word, that is, how we speak the word and it helps us dissociate spelling of the word from how we speak a word. Same thing, 'mommy', 'ma', 'o', so this vowel is actually like this 'o' 'ma' and 'ii' so this is consonant, vowel, consonant and vowel. This is an example of the same thing that we were talking about.

So, large number of words in any language including English comes out of this sequence. We also have sequence like CVC, which is basically a subset of the first one. You get words like 'dad', 'mom' and so many numerous of them, how many examples can I give

you. Once you understand this sequence, once you understand the sequence of, role of this sequence in designing a word, creating a word or understanding a word, you will see is the underlying structure of word formation in any language. Then we have VC or CV, we can have a word with that as well.


So, we can we can see, we have words like 'am', 'is', 'are', 'it', 'in', 'on', 'at' and probably many more. You can change the sequence like you can have V and C sequence and you can still get so many words out of it. Then we have words like CVV, that is, a consonant and two vowels.

So, we do have words like 'the', some people, this is the word determiner, some people pronounce this word differently. I am sure some of them pronounce it as 'the' a dental 'd' and long 'ii'. So it is an example of either you can also say this is an example of basically C and V, that is all right. C it this is again a consonant and vowel or so the basic point is a word has alternations of consonant and vowel sounds in them. This is the basic example that I am, basic conclusion that I want to take out of this little discussions that we have had so far.

Please note, so if I say 1, 2, 3, 4, let us put them in sequence. So, 2, 3, 4 are in some ways, subset of 1. You can also add another CV here, that is not a problem. The problem is any other combination of alternations that we get out is going to be basically the subset of what we see as number one.

So, if we can come up with a smaller rule, that a word is basically CVCVCV sequence. At the very beginning, right at the first place this may not make sense but once you go through the details of this, what you derive is a word is basically this and every other combination is part of that. So, that is what we want you to draw your attention to.

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Consonants

- Sounds produced by modification of the flow of exhaling air in the vocal tract

- voice	• /k/ -- velar	king, class
+ voice	• /g/ -- velar	great, glass
- voice	• /p/ -- bilabial	pink, pure
+ voice	• /b/ -- bilabial	bliss, bless

- They have an inbuilt vowel sound 'a' with all of them.



So, that is one significant part and it is important to know right in the beginning as we are beginning the discussion on sounds and their roles in a word. So, as you have seen, just to refresh your memory since I have been talking about the consonants, consonants, consonants, so just to give you some examples, please go back and refresh your memory. 'k' is a velar sound, a canonical sound in most of the languages of the world including English, and here we are talking about English 'k'. It is a velar sound and that is the place of articulation for the sound is velum therefore, it is called velar sound. 'g' is also a velar sound, as you know 'k' as a sound is minus voice.

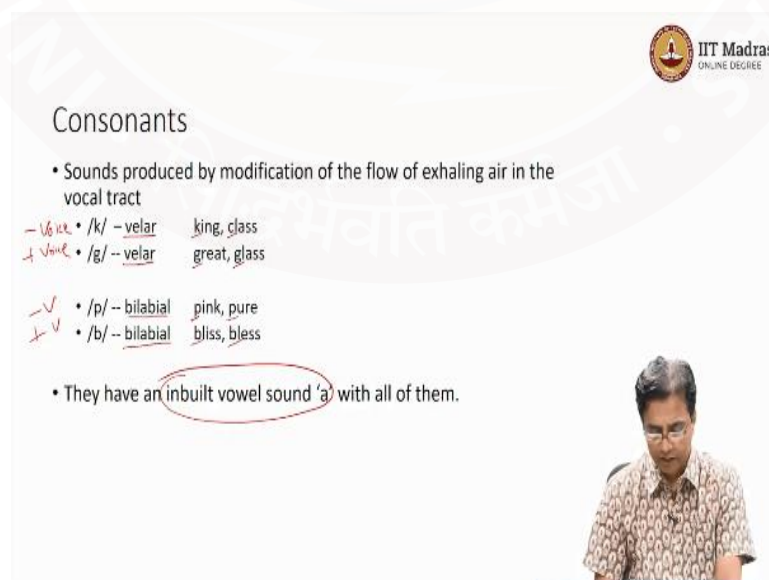
Let me write it as full, that is, there is no vibration in the vocal tract, in the vocal cords and 'g' is plus voice. Same thing here, 'p' minus voice and 'b' plus voice and both of them are bilabial sounds. So, here we have some examples as, words like 'king' has 'k' sound, words like 'class' has 'k' sound in the beginning of it, word like 'great' has 'g' sound and 'glass' has 'g' sound, 'pink' has 'p' sound, 'pure' has 'p' sound, 'bliss' has 'b' sound and 'bless' has 'b' sound in the beginning of it. We will come back to this slide one more time.

What we need to understand is how it happens and how do we understand this phenomenon, I just gave you an example of a word which is, there are words like function words 'a' which is just one sound. So we have we also have words like 'eye' which has got two vowels which is also a word. So, that is to make the point that we do have words only with vowel sounds but we do not have words only with consonant sounds. So, that is, that is just to take you to the, to the beginning part of the sequence of sounds in a world.

So, we will come back to this part and you will see the point, and I am purposely making this point at this place just so that it will register for you: words are possible only with vowel sounds, words are not possible only with consonant sounds. So, you can have a word like V and V, or just a V but you will never have a word like just C and C, or C and C and C that is without a vowel. You must have a vowel after this then this sequence is possible.

So, now you could have guessed why I gave you this example of 'eye' and 'a' because they look like a cluster but that is not a cluster. Vowels do not make clusters, only consonant sounds make clusters, and there is a specific reason for that and the reason is the following.

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Consonants

- Sounds produced by modification of the flow of exhaling air in the vocal tract

voiceless	• /k/ -- velar	king, glass
voiced	• /g/ -- velar	great, glass
voiceless	• /p/ -- bilabial	pink, pure
voiced	• /b/ -- bilabial	bliss, bless

- They have an inbuilt vowel sound 'a' with all of them.



Simple words

- Most of the words are a sequence of consonants and vowel sounds.

1 • CVCV	papa, daddy /daedii/, mommy /miomii/	
2 • CVC	dad, mom,	
3 • VC	am, is, are, it, in, on, at	VC - CVCVCV
4 • CVV	the /dii/, sea /sii/	
• CCVC	what, glass	cluster CC
• CVCC	sink, link, sing	

- Words only with vowels sounds

• Eye	/aai/	VV	*CC	*CC
-------	-------	----	-----	-----



Now, look at this when we say 'k' or 'g' or 'p' and 'b' just for example as consonants, we see that these sounds, when we speak these sounds out of a word, that is out of its context, we have to say, we hear a inbuilt vocalic sound 'a' at the end of it 'k', 'g', 'p', 'm', 'b'. Take any example of a consonant sound not just the four that I have given you here, you saw you hear a vowel sound at the end of these sounds. The way we put it is that all consonant sounds have inbuilt vowel sound, one is specific vowel sound in it, which is inbuilt in all vowels.

So, what happens in a cluster when you have CC two consonants coming together? The way it forms a cluster is not just the sequence of two consonants next to one another. What happens is the first consonant drops its inbuilt vowel sound from it and therefore the two sounds in a sequence without the break.

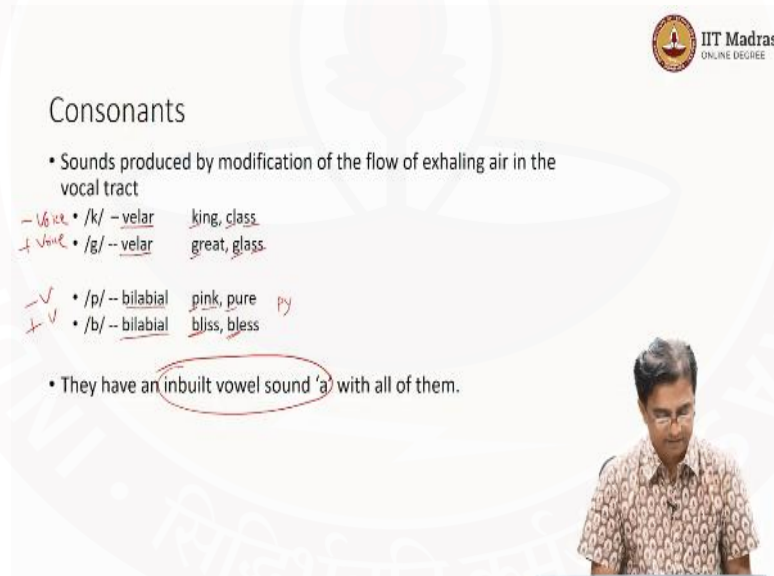
So, when you say a word like 'glass' it seems like 'g' and 'l' are together, it is not g-lass, it is not g-lass, it is glass. 'sink', it is not 'sinik' it is not 'linik'. It is not, I mean it is even tough to give you an example. The point that I am trying to make is when we say these words, we hear no vowel sounds in between the two consonants and that is an example of a cluster.

Hopefully it is clear to you that is what we mean by a cluster, should be clearer to you and when you observe more from these examples and therefore, I do mention it every

now and then that please do observe these phenomena . Please do understand these things in as much details as possible, and then they remain with you forever. You understand them fully and trust me, it has exponential impact in the process of learning which is largely a subconscious process.

So, what do you see here? In some words like ‘what’ and ‘glass’ you see the sequence of these two consonants in, right in the beginning of the word, that is at the initial position of the word. In the second sequence words like ‘sink’, ‘link’, ‘sing’ we see the sequence of two consonant sounds at the final position of the word, that is ‘a’ at the end of the word. So, what do we derive from here? Clusters in a word, that is, cluster of two consonant sounds in a word may occur at the initial position as well as at the final position of the word. That is all we have seen so far.

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Consonants

- Sounds produced by modification of the flow of exhaling air in the vocal tract

- Voice	• /k/ -- velar	king, class
+ Voice	• /g/ -- velar	great, glass
- V	• /p/ -- bilabial	pink, pure py
+ V	• /b/ -- bilabial	bliss, bless

- They have an inbuilt vowel sound 'a' with all of them.

So, let us look at words. So as you can guess now on this slide all the words that I have tried to put for you like ‘king’, ‘class’, ‘great’, ‘glass’, ‘pink’, ‘pure’, ‘bliss’, ‘bless’ all these words have cluster in it, that is, a ‘king’, as cluster at the final position; ‘class’, has cluster at the initial position; ‘great’, at initial position; ‘glass’, again at initial position. In words like ‘pink’, cluster the final position; ‘pure’, cluster at the initial position, here you have a cluster of ‘pa’ and ‘ya’. In some varieties, like the English, the way we speak English in India, it is also termed as Indian-English there is nothing offensive about


Indian English. It is English the way we speak in India, and I am not simply asking you to be proud of this variety. It is a legitimate variety by itself. This is how we speak and there is no way we can change the way we speak at a later stage in our life, that is after our vocal tract has become matured.

So, in our language, in our English when we say the word, some words like 'pure' this is just an example, we hear a vowel sound 'p', 'i', 'y', 'o' and 'r'. So that sequence is different but in some variety like British or American or Canadian variety of English, people can use this as a cluster and that there is nothing problematic about it. Some words, we speak without clusters, some words some other people speak as clusters, that is not a problem. There are a lot of words in Punjabi variety of English which does not have clusters at all, where you will find clusters in Indian English as well: 'school' becomes 'sakool' or 'station' some speakers would say 'satation'.

Now, I do not mean to brush this phenomena aside in the passing. What I am trying to tell you is it is important to know about the way we speak and it is perfectly fine. There is nothing problematic about it. It is a legitimate variety. However, if we want to change that, we need to know what we need to change and a discussion like this about accuracy in learning is going to help you in that direction.

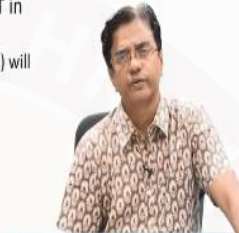
So, you want to speak a word like 'pure' with cluster, you need to, you need to work on it and then you will sound like speaking a cluster when you speak this word. So, for that, you need to know what a cluster is and how it works. That is the purpose of this discussion. So, in a word like 'bliss', you have cluster the initial position; 'bless', cluster at the final position. One more time: you know that this is about that is 's s' at the end of words like 'class', 'glass', 'bliss', 'bless' it is a matter of spelling. These are not examples of clusters.

(Refer Slide Time: 28:57)



Consonant Clusters

- Two consonant sounds together without the inbuilt sound 'a' from the first one.
- Reduction of the inbuilt vowel sounds from the first one
- Cluster - /klastar/
- Cluster of sounds occur at any place in the word, however, NOT in random order
 - No two sounds from the same place of articulation (other than nasals) will become part of the cluster.
 - *pb (not good), but mb or mm are good.



So, we have talked about clusters, we have introduced clusters. I think you understand the phenomena of cluster and now, what I want you to do is to pay attention to the words; whether a word has a cluster or not and if it has, at what position of the word it occurs, what are the sounds possible in cluster. Not all sounds are possible in cluster.

So, one more time: to summarize that part please understand, two consonant sounds together without the inbuilt sound are, this is the critical part, not just two sounds, not just two consonant sounds together but two consonant sounds together without the inbuilt vowel. In the first one is cluster which is also which we can put that same thing as reduction of the inbuilt sound from the first one makes cluster.

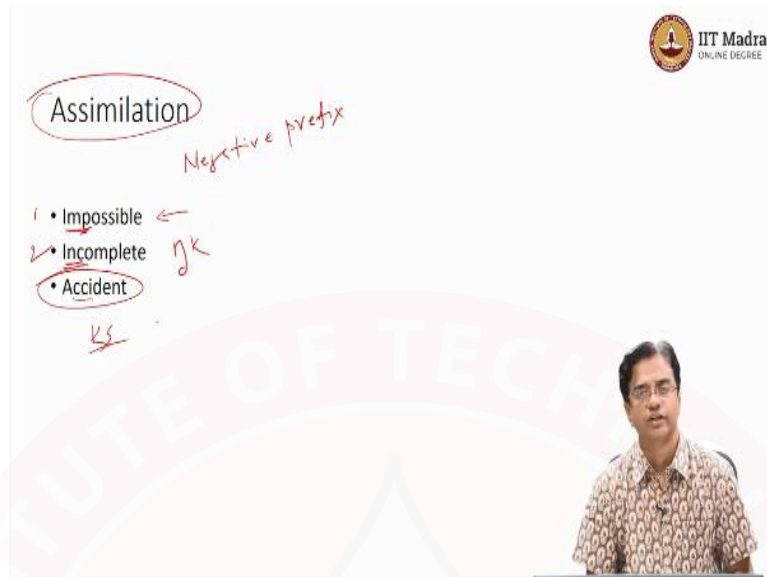
The word 'cluster' itself is an example of cluster, so look at it, it has two clusters and this drew my attention and I thought I should give you an example. I have talked about two consonant sounds as cluster in the initial position, in the final position; it is also possible in the middle of a word, what you see here, it's also possible, cluster is also possible at multiple places in the same word. Look at the 'cluster', a sequence of two sounds in the initial position and a sequence of two sound 'sta' in the middle of the word. So, the word 'cluster', two clusters in one word. So that is an example of a cluster.

What you will notice when you move further is two sounds from the same place of articulation do not participate in a cluster, that is, you will not see, look at these words. 'k' and 'l' are making clusters, 's' and 't' are making clusters. In previous words that you have seen, 'b' and 'l', 'p', 'n' and 'k', 'p' and 'y' again 'k' and 'l' these sounds are making clusters, so 'k' is a velar sound, 'l' is a lateral sound, these are from different places of articulations in our vocal tract.

But you will rarely see a two sounds from the same place of articulation, that is, two oral sounds. This star means not possible. So this star means it is not possible, this sequence is not possible, I am putting it in parentheses is 'not good', meaning it is not a possible sequence. So, you will not find a 'p' and 'b' making cluster in a world. If you notice please bring that to our attention. 'm' and 'b' however is a good sequence. So, when I say two sounds from the same place of articulation, I need to add a rider here, one can say 'm' is also a bilabial sound, but there is a distinction, 'm' is a nasal sound, 'p', 'ph', 'b' and 'bh' these are oral sounds.

So, the important point to note here is, two oral sounds from the same place of articulation is not possible in the cluster. I will wait for some more examples if you can find some. So, 'm' and 'm', 'm' and 'b' possible, 'm' and 'm' possible, so that is possible as sequence.

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This knowledge about, so now before I conclude that, I want to tell you to note clusters in the words, even if you have to spend half an hour time to find some words which possibly has clusters, please do spend time on that and see the things that we have discussed are applicable to those words or not. See how we speak those words and see if what we have discussed can help us improve those words in any way.

Before we conclude, I want to give you a specific example of a specific phenomena which we can understand through cluster. This is called assimilation. Look at this, in some words like this, the word, look at the word 'impossible' and I want your attention here. So, we have a negative prefix 'im' is a negative prefix and look at another word 'incomplete'. Here also, 'in' is a negative prefix. So, us paying attention to this particular part is going to help us improve our pronunciation as well and once we know and we pay little bit attention to this, we fix this thing forever in our learning.

So, in the negative, in the first word, let me give them numbers, in the first word 'impossible' negative prefix gets a labial sound because the following sound is a bilabial sound. 'p' is a bilabial sound, so the negative, the consonant sound in the negative prefix assimilates itself according to the first sound of the word it is going to negate. So because of 'p' sound, it becomes 'm' and then we get 'impossible'. This is, I do not want to use a heavy word for this, you can read about it this kind of thing is called assimilation, that is

when one sound changes, forces itself to change under certain kind of pressure in a particular environment, then it is this such a thing is called assimilation. You do not need to remember this thing, rather you only need to pay attention to what I am asking you where I want your attention because this has implications for improving our pronunciation and it has also implications for understanding clusters.

So, 'impossible'. Here it sounds, 'm' negative prefix, sounds as 'm' because of the word 'possible'. In words like 'incomplete' you will get to know that it is not 'incomplete', that is 'n' sound is not a dental 'n'. It is not 'n' in, it is not 'n' as in 'in'. Rather it becomes 'n' a velar nasal in presence of a velar sound 'k' which is this one, so look at this. So, it becomes 'incomplete', 'incomplete'. In our English we can also say 'incomplete', we can train our vocal tract for that it is possible but it sounds more impressive when you say 'incomplete'. Whether, or not it takes time to reach there, more important is for you to know this is how it works and then we get to know about very basic nuances underlying construction of words.

So, I did not mean to give you just a definition of a word, did not mean to say words this combination of sounds. We need to go into the details of that and need to look at what those sounds are, how they work and only then we get to see the significance of our understanding, the time that we spend on understanding vowel sounds, consonant sounds, their places of articulations, why is it important to know different places of articulations for vowel sounds.

It does not become apparent right in the beginning but once you see contextual implication of such things and only then you can evaluate whether or not they have a role in learning English for us or not. You may be wondering about the last word 'accident'. This is an example of a cluster, just give you a cluster out of the context here because the, in a word like 'accident', often we think as 'k' and 's' are making cluster. Actually it is not because these are at syllable boundaries. 'k' is at the end at the final position of the first syllable and 's' is at the initial position of the second syllable.

So, it is not really a cluster. This is, this example just I gave you just for you to understand and close the discussion with cluster and it will become clearer as we move

forward and talk about other significant parts that are going to help us improve our learning, that are going to help us improve about our understanding of the nuances of English language. Thank you so much.

