

Basics of Language Science
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Lecture 10
Structure of Language (Sounds)

Professor: Now we are going to begin talking about the structure of language. It is part of the I-language and this will help us understand underlying patterns. So first we are going to see it as part of a structure of language, sound system. So, last time or a couple of days ago I asked you, what is the difference between consonant and vowel, did I? Did you get a chance to take a look at that? Let me go back. Have you learned a language in the classroom? Yes. Which language did you learn in the classroom?

Student: English.

Professor: English? When did you start learning English?

Student: Three to four years.

Student: LKG.

Professor: When?

Student: LKG.

Professor: LKG. Then why did you have to learn it later also? Were you taught English in schools and high schools also?

Student: Yes.

Professor: Why? If you have, if you already did that in LKG then why did you learn it again in high school?

Student: We did not learn fully.

Professor: Go ahead.

Student: We did not learn the complete language. ((??)) (1:52) did not learn it, but then this added more words to our vocabulary.

Professor: More words to vocabulary, later.

Student: In the process.

Professor: In the process, okay. So, at any point in time, there are lots of questions that one can ask, but right now I will focus on the questions that are related to sounds. So, at any point in your learning of English, where you were taught about sounds, that is particularly consonants and vowels. Yes or no? Yes.

Student: Taught the letters.

Professor: All right, letters fine. But did they say something about, did your teacher say something about consonants and vowels? Yes, no?

Student: Do not remember.

Professor: So at least you can say we were told, right? But you do not remember. Does anyone remember consonants and vowels? No. Okay. So, can you tell me the things that you remember about those classes, just a couple of them? Not everything you have to list for me.

Student: We were told A, E, I, O, U are vowels and rest of them are consonants.

Professor: A, E, I, O, U are vowels and the rest of them are consonants. Are you happy with that?

Student: The why part is also there. A, E, I, O, U.

Professor: Why are they sure, that is an important question. Why are A, E, I, O, U vowels and the rest of them consonants? Any idea?

Student: They start from the tip of the tongue. Let us say ka, ba starts from the tip of the tongue.

Professor: Ka, ba starts from the tip of the tongue? Say ka. Do you see any role of the tip of the tongue in that? No. ba. Any roll of tip of tongue in that? No.

Student: A, E, I, O, U represent sound, we have sounds in it aa, ee, while if you take the letter B, we use our lips also, B, that part is also there. So, sound plus that part lead to the consonants.

Professor: Okay. So, you did not ask these questions at all.

Student: We might have asked.

Professor: You might have asked, you do not remember. Okay, all right. What do you think which language do you speak other than English?

Student: Malayalam.

Professor: Do you think we have vowels in Malayalam also?

Student: Yes.

Professor: Yes. What are the vowels of Malayalam?

Student: A, aa, e, ee, u, uu, ai, aai.

Professor: Not a, e, i, o, u?

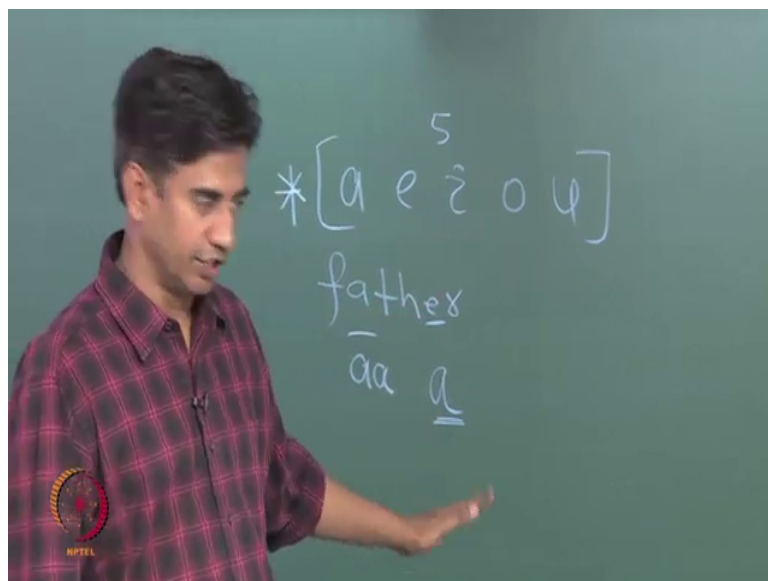
Student: Not ((??)) (4:51).

Professor: So, aa is not available in.

Student: There are 3 vowels in Malayalam, the sound is aa just as sound A.

Professor: Do you see the things that we are talking about? Do you follow why we are talking about these things? Vowel sounds are not specific to English or Malayalam. I will ask you one more question before I start with what I have to show.

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Many of you were told, these are the a, e, i, o, and u, these are the vowels, right? I think you were also told that we have only 5 vowels in English. Am I right? Now, I have a word for

you. All of us have learned this word. And I will just give one example for today. When we say this word and hear me out carefully when we say this word, what is the first vowel that you hear?

Student: Aa.

Professor: Loudly?

Student: Aa.

Professor: Where is that in this? What is the vowel, this one is?

Student: A.

Professor: And what is the first vowel of this word?

Student: Aa.

Professor: Are they the same thing? No. These are the vowels of English and this is a word of English. I am not telling you anything new, you learned this thing and then you learned this word also. You were told very conveniently; these are the vowels of English. And then you were told a word and, in that word, there is a different vowel which is not part of these 5. Did this raise any question in your mind? Did you ask this question? What is the next vowel of this word? When we say this word, what is the next vowel?

Student: Aa.

Professor: Aa. What do we write? So, we are saying the next vowel is aa, so the first one is aa, I am putting two of them to show length, and then we are saying the next one is let us say a. So, there are two vowels in this word, one is aa, the other is a and we write them differently. We write something else; we call it something else. Do you see the inconsistency? Now, I am pointing out these things not to show your flaws in English. I am asking, I am showing you these things to sensitize to the things that you may or may not have paid attention to.

Now, can we say the vowel aa is not part of English? Can we say that? If we are told, we memorized, we got good grades right from LKG and we are doing great. So, can I say aa is not available in English, we cannot say that. Then either one of the two possibilities is wrong. Either this is not right. In that case, we can say the fact that we are told there are 5 vowels in

English is wrong. Or we can say aa is a vowel that is not part of the English sound inventory. Do you see my point? One of the two is wrong. Which one do you think has problems?

Student: First.

Professor: First one.

Student: There are only 5 letters to represent all the vowels but the spoken language has more vowels.

Professor: Spoken language has more vowels. So, we are saying, the moment we are told that there are 5 vowel sounds in the English language, we need to specify that we are talking about 5 symbols of the Roman alphabet, which are 26 in number. Out, when we pay attention to English as a spoken language, or when we learn English as a spoken language, English as part of his spoken repertoire, then we find a different inventory of vowels in the language. Get it?

So, in the language for the sake of learning to speak, there are not only 5 vowels in English. Get this. So, aa is also part of it. How are these things taught to us? Do you remember your LKG or class 1, class 2 English classes? How are these alphabets taught to us? Does anybody remember?

Student: With the name of some objects.

Professor: Right. So, how does that work?

Student: A for apple, B for boy.

Professor: A for apple, B for boy. Now, I want you to pay attention to the word apple. What is the first sound of the word apple?

Student: Ae.

Professor: Ae, where is a in that? Do you see this thing? The goal of teaching is spoken English. And we want to teach them A for apple, there is no A in the word apple. This is the problem. Second, I will not go all the way through the list because that is completely flawed. At this stage now you can see this at least. You started learning English from LKG. Do you hear the word A, the word the sound A in the word apple? And we teach A for apple. What kind of teaching is this? What do we want to say?

If we were trying to teach the word apple, writing of the word apple begins with the alphabet sound, sorry alphabet symbol A, then it is making sense, right? But we are saying A for apple in spoken language. This is why I gave you the example of the word father, 5 vowel sounds and the first sound is not part of these 5 inventories, this whole inventory of 5 sounds not part of that. So, the moment we start paying attention to a spoken language, things are different.

Just look at one more example. The next one is B for Boy. I think across the country, or maybe across the globe, this is how it is taught. And then some schools may be using more fancy things like rhymes and other stuff. You tell me, is this the sound, is this thing B even a sound? So where is B in Boy, what is the first sound of the boy?

Student: Ba.

Professor: Ba, where is B in that, see this thing. Where is B in that and if you can add just one more, it can only become funnier. What is the next one? C for Cat.

Student: Cat.

Professor: What is the first sound of Cat?

Student: Ka.

Professor: Where is C in that? The first sound of the word Cat is the sound ka.

Student: Ka.

Professor: I hope you can see that we are not making up these things. We do not need to really go to a sophisticated laboratory to see these things. There is no A sound in the word apple, B does not even become a sound, and C for Cat is completely outrageous, because the first sound of the word Cat is ka, which has nothing to do with C, see this thing. Now, the goal of this thing is not to show you these issues and by no means I am trying to say what you have learned is wrong, I am sorry what you have learned is bad. What I am trying to say is there is a huge mismatch.

Now, let us only underline through this description of what we have done is that these things should be helpful for us in understanding sound systems, which is to say sounds of a spoken language are completely different. No, not different, the writing system may not have to correspond with sounds of the language. No matter how much you teach A for Apple, B for

Boy, or C for Cat, every child has already figured out that there is no sound called B, we need to say ba there is no sound called C we need to say ka.

So, what are the three sounds of the word Cat, ka, ae, and ta, see this thing? First consonant sound of the word boy, ba, you keep teaching B, C and all that, but children learning these things have figured out that actual sounds are ba, ka and ae, they may not have anything to do with A, B, and C in the spoken language, get this thing. This is what I want to underline to you.

Then again, nothing against these things, these are symbols of written script, therefore, they do not represent the total number of vowel sounds in English. The total number of vowel sounds in English is not just 5, there are more than that. Can I leave this to you as an assignment to find out the total number of vowel sounds in English? Now, when we move on, now I connect with the things that we have been talking about.


Sounds are building blocks of language. We have seen there could be many words in a language, an infinite number of sentences in a language, but a limited and finite set of sounds in every language. That finite set of sounds is very small in number. When we look at the inventory of sounds across languages, we find very few sounds differ in two languages. There are very few sounds that are different in two languages. In other words, what we are saying is words, sorry, languages share sounds. Get this thing? Languages share sounds.

The more number of sounds that are shared between two languages, the closer the two languages are in terms of comprehension and production. The fewer the numbers of common sounds in two languages, the more and more differences in two languages. These are some of the common generic features of sounds. Then, we started talking about consonants and vowels. And you were saying that probably we do not remember what we were told. And if at all, you found something you remember, this is what you remember.

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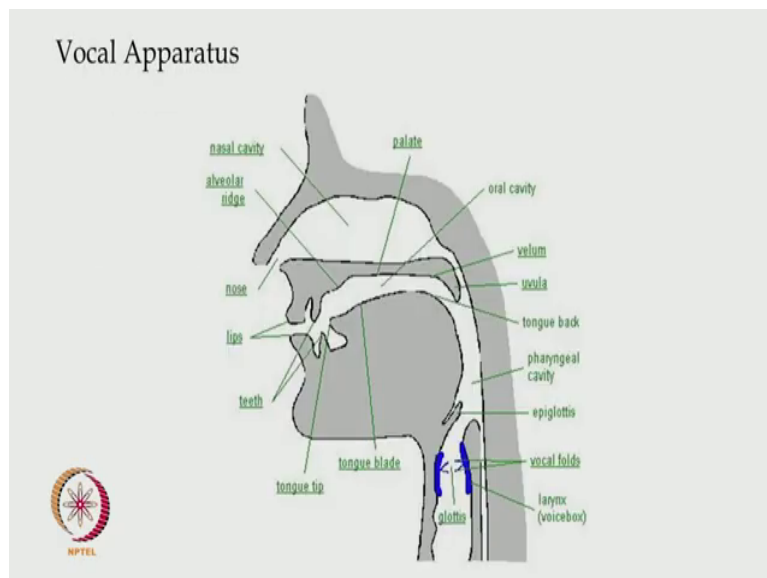
Sounds

- Sounds are basic blocks of Language
- Consonants and Vowels
- Places or Articulations and Manners of Articulations
- Two broad types
 - Orals
 - Nasals



Let me tell you about sounds, that is also consonants and vowels. Before we look at that distinction between consonants and vowels, I want to show you a particular picture.

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Do you see this thing? What does this look like? This looks like...

Student: Human face.

Professor: A human face that is some kind of drawing of this part, remember this, see this, there is some kind of drawing of this part. There are two things here, where I want your particular attention. All the names that you see listed are going to be important, but there are two things right now that I want you to see. This is one, this part you see, this is called you

see this thing, these are lips, teeth, tongue, and this thing, this part is called oral cavity, and this part is called you see here, nasal cavity, and this thing is called oral cavity.

Just these two parts, I want you to see first. Sounds that are produced in the oral cavity are called oral sounds and sounds that have something to do with the nasal cavity are called nasal sounds. So, all the sounds that you know irrespective of vowels and consonants are going to be of two types, either oral sounds, or nasal sounds, and only this much of apparatus is responsible for sound production, sounds of language. A little bit more about this in the sense that when, how, what is responsible for the production of sounds?

These are the places in which these are the different types of cavities, oral cavity, and the nasal cavity where sounds are produced. What is responsible for sound production?

Student: ((??)) (22:27)

Professor: In fact, all of them. I am talking about something else. Which is, if we have to, let me ask you a different question. If we have to say a sound, let us say ka and a. So, ka is consonant or a vowel?

Student: Consonant.

Professor: Consonant, right and a is a vowel. Even though it is not very clear at this stage, how to define a consonant and vowel, we know these two things right, ka is a consonant and a is a vowel. If you have to say these two sounds, which one do you think you can say for a longer duration?

Student: Aa.

Professor: For how long do you think you can say this thing?

Student: Forever.

Professor: Forever?

Student: We can say for a long time.

Professor: Long time, but for how long?

Student: Till our breath.

Professor: Till our breath, till we can hold breath. See, we need to be specific, therefore I interrupted, not forever, ever is such a long time. We cannot say anything forever. However, we can keep saying the sound a for longer duration, as long as we can hold breath. Now, why can we not say ka for a long time?

Student: There is a blockage between consonants.

Professor: There is what?

Student: It is an unrestricted passage for vowels but for consonants there should be an obstruction here ((??)) (24:14) to become a consonant.

Professor: Very nice. Why didn't you say this thing when I was asking you about the difference between a consonant and a vowel?

Student: ((??)) (24:24)

Professor: They did not teach you this thing, then how did you learn that? Very nice. You found that right. All right. So, see a lot of times it happens that you find out things on your own. And it is a generic thing, not generic belief, specific belief at least language learning. You have seen how children acquire language just yesterday. And I have tried to show you so many things about that. And then it is not too much to say that children learn much more than they can be taught.

In fact, there is no way one can teach everything that children know, see this thing. There is absolutely no way one can teach, and you do not even know what kinds of things children learn. They also learn not to tell others what they may have learned. See this thing, these things possibly cannot be taught. Probably these things apply to everybody in a limited sense, but it applies to everybody a lot of things you figure out on your own.

You just saw this thing that you were taught, you saw A for Apple, B for Boy, and C for Cat. And now, what you have figured out is very nice. I am really impressed that for a consonant sound, there is some kind of obstruction. And we will talk about those obstructions in order to be specific. And for vowel sounds there are, it is not fair to say there is no obstruction, there is little obstruction. Because if we say no obstruction, then we will keep speaking all the time.

Everybody will keep speaking, you just cannot stop if there is no obstruction at all. But let me go through this thing phase wise. So, what is the thing that is responsible for speaking? What is the thing that is responsible for speaking?

Student: ((??)) (26:46)

Professor: No. These are the organs? You just said something I asked you this question for a specific reason. My question was for how long do you think you can keep saying as long as we can hold breath. So, what is responsible for sound production is breath. It will be easy for you to understand as you are engineers, the human body is the best example of perfect engineering. Nothing happens in the human body which has got no meaning, which has no purpose.

See, we inhale air and that is called breathing. What happens in breathing, we inhale and then exhale. Inhaling is like input from the immediate society. We inhale, what happens that air goes all the way to where the lungs are, and this is not biology 101, this is something general knowledge that all of us know. It goes straight to the lungs, it is separated into different parts, at least what lungs retain, what body requires, which is, which is?

Student: Oxygen.

Professor: Oxygen, lungs retain oxygen that it has separated from inhaling air, which is required for the body, production of blood and blood circulation and all other kinds of things. We do not need to go into the details of that. What it also does is exhales the rest of it that could be carbon dioxide or anything else, it only retains oxygen and exhales everything else. This is what is called the breathing process. What is responsible for speech sounds is exhaling air, not inhaling air, exhaling air.

The moment it starts from the lungs, it comes to these areas, the places that you were talking about vocal cords, larynx, velum, and anything else that you see oral cavity and nasal cavity. The exhaling air is moving through these passages and with more obstruction of that exhaling air, we get consonant sounds with a little bit of obstruction of those, that amount of exhaling air, we get vowel sounds. This is so far common for all the languages of the world.

Because there are only a few, there is a limitation of this apparatus. This apparatus is limited in its physical form, therefore, only limited sounds, see this thing. Why limited sounds, because there is physical limitation on our apparatus, where the total number of places of

articulation for different sounds is limited in number. However, for combining sounds together and combining words together, what is responsible for them for those processes, the responsible mechanism for those processes is generative capacity.

And generative capacity has something inbuilt, which can result into infinite things, therefore infinite sentences and words, however, a limited number of sounds, get this thing. I will give you this picture, we will upload this online as well so that you can see these things. One more thing, you see this, there is one more part which is important where you can see before I give you examples of actual sounds. You see this part, what is this called? This part is called uvula, you see this area.

Now, this is one thing, I mean, it is hard to see the glottis and larynx and other things. You can see them in pictures, but it is hard to see in an actual sense. However, uvula you can, if you try, you can see that, you just have to open your mouth wide enough. Do not do it in public, it is not a good thing you can do it on your own, whenever you feel comfortable. It is not a very nice-looking thing, but you can still see that. It has got a very specific purpose, what it does is when we are speaking things when sound production is in the process, if it is lowered then the passage to the nasal cavity is open.

Should not be a very difficult mechanism for you to understand and the moment there is some amount of flow to the nasal cavity it gets, sounds get nasal quality, therefore nasal sounds. So, when we say sounds like ma or na what happens is the uvula gets lowered. Some part of the flow of air moves through the nasal cavity and therefore we get nasal sounds. There are more nasal sounds that we get, but this is how we get it. When the sounds are not nasals, the uvula is raised, which means the passage to the nasal cavity is completely blocked, therefore no nasal quality on sounds.

What we get are only oral sounds. So, when we say ka or ba or pa do you hear anything nasal about it? We do not realize but uvula is raised. So, a lot of physiological processes that keep going on, motorized, motor control things that are going on, we are not aware of them, but those things keep happening, that is called conditioning of the vocal tract. Speakers of a particular language have a particular set of sounds.

While acquiring that language what happens simultaneously is our vocal tract gets conditioned for that language, for the sounds of that language. Therefore, when we speak English or we learn English later, we say, we speak English differently from those who

started English, who started learning English way too early. In other words, if we consider some people as native speakers of English, our English is different from them, because of that reason. Under no circumstances, we are going to be speaking like them. You see my point.

Therefore, if we do not speak the way Britishers might be speaking or Americans might be speaking, that is not our flaw, that is related to conditioning of the vocal tract. The places where we grew up are responsible for input. And that input is responsible for conditioning of the vocal tract. And then when we learn something else later on, that conditioning stays, and if we want to learn some new sounds from some new languages, then those sounds get influenced by how our vocal tract is already conditioned.

It works the same way for native speakers of English, if they try to learn Hindi or Malayalam or Punjabi, or any other language, the same thing happens to us. Therefore, please keep this thing in mind, that we cannot be speaking that way and it is not our flaw. If someone tells you why you do not speak English the way Americans speak, it is one of the most unethical questions to ask. It is like saying why do not you look like Americans?

Do you see the point, it is just not possible. What is responsible for that is how and when the conditioning of the vocal tract really took place. There are some people who are born and brought up in America, who look like us, but their conditioning of the vocal tract is perfectly like the conditioning of the vocal tract of a native speaker. They speak English differently, they speak English very differently from us, and their conditioning is responsible for this, get this thing. So, these are a couple of side notes, I will keep coming to this picture once again.

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Sounds

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- Consonants and Vowels
- Places or Articulations and Manners of Articulations
- Two broad types
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Right now, I want to take you to these terms. So, two broad types, oral and nasal, clear. Places of articulation and manners of articulations are the two things that we will be talking about. Places of articulation refer to different places in this vocal apparatus, which are responsible for sound production. And how that is, there are more things responsible for that, which is referred to as manners of articulation. So, these are going to be two important things, which we will be looking at in a clear way.

And on the basis of these things, we will be able to see the clearer distinctions between consonants and vowels. And to begin with, the actual distinction between the consonant and vowel is the unrestricted flow of air with a little bit of obstruction results into vowel sounds and more obstruction at particular places gives us the consonant sounds. Sometimes that obstruction could be total obstruction, sometimes that obstruction could be partial obstruction, but there is a substantial obstruction when we are talking about consonant sounds.

So that is the fundamental distinction between a consonant and a vowel, all right. There is one more thing which is important for you to know, which is all the consonant sounds of all the languages that you know or you may not know have one particular vowel already in-built in them. One particular vowel is already in-built in them and you can figure out these things very quickly. When we say a sound like ka do you hear any vowel here?

Student: Aa.

Professor: When we say Ma.

Student: Aa.

Professor: Pa or any other vowel, any other consonant that you know or you may not know will have this sound in-built in it. That is also the reason why we are unable to say a consonant for a long time. Because if you try speaking a consonant for a longer duration, what you end up doing is, you end up speaking the vowel sound. In fact, it is so important that we cannot even say a consonant sound without that. Can you try saying ka without that a?

Student: ((??)) (39:44)

Professor: Nice try. Nice. But you realize what I am saying. It is impossible to say...

Student: ((??)) (39:59)

Professor: Sorry.

Student: Suppose if we say the word sankalp.

Professor: Sankalp.

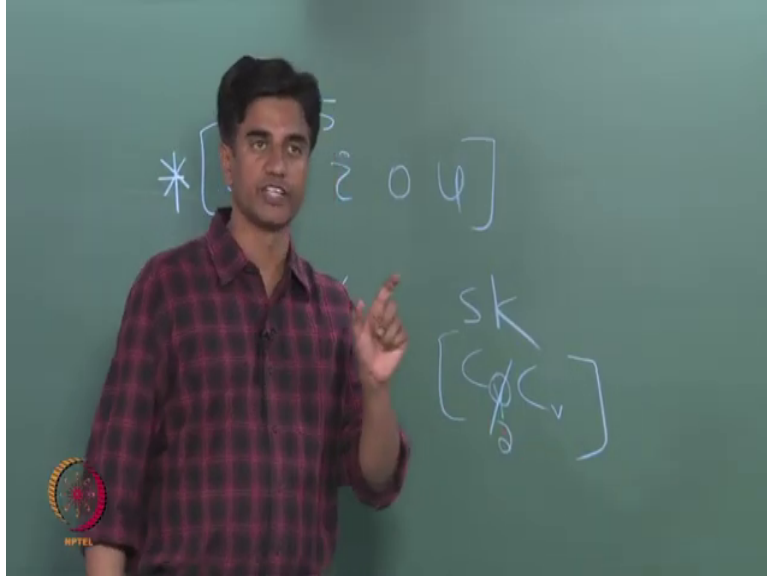
Student: So, the la is just the consonant without an addition of ((??)) (40:11).

Professor: Sure, right. That is true. So, I am not saying it is not possible at all that is going to be possible in a word. But can we say that half la, you get my point? What I am saying is, if you are saying just an isolated sound there is no way we can say that. However, that is a great example. It is not just Hindi, in all languages of the world, we can say sounds without that vowel only when they are in words. For example, when we say a word of English like school. The first two sounds, what are they?

Student: Sa.

Professor: Sa and ka right. And I think I have given you this example earlier also, that if we want to reduce the cluster, we would end up saying it as Sachool. So, the fact that we are not saying sachool, and we are saying school, something is happening to that. What is happening here in the word sachool, I am sorry, school.

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So, we have two sounds here sa and ka. Both of them are vowels, I am sorry, both of them are consonants. We know that consonants have inbuilt vowel sounds in them, that inbuilt sound is actually a, this is how we represent them, it is called a shwa. So, when they form a cluster of two consonants together, this one is dropped. So, dropping this vowel out of an isolated sound is not possible. However, dropping of this vowel quality that is inbuilt vowel quality out of a sound is possible when they form a cluster with another sound, say this thing.

So, we can say school where sa is being spoken, being pronounced without that a. The moment we add that a, that becomes sachool. Right, the moment we add that vowel it becomes sachool. You see, what Punjabis are doing? They are not doing anything wrong. It is simply the fact that their language does not allow clusters, that is to be more specific, we can say their language does not allow dropping of that inbuilt vowel from a consonant sound.

And this cluster of two consonants or three consonants are not only possible in the beginning of a word, it is also going to be possible in the middle of a word. Therefore, we get words like sankalp. Okay, in a language like Hindi, what is not possible is a cluster at the end of a word. At the end of a word, where the last consonant is going to be half, that word is not possible in a language like Hindi. However, they used to be possible earlier in something like Sanskrit.

So, you may have things written at least in some places, words like Swagatam, have you seen this word written? And then in some of the letters, you see some slant line given. That is an indication of half sound. That is, that half sound simply means lack of that vowel. So probably in old times it was possible to say, a half sound at the end of the word in a language like Sanskrit. But now that word is part of Hindi, Swagatam, we do not say that as a half. We


may write in any which way we want but we do not say it that way. We still say, how do we say that word for welcome?

Student: Swagatam.

Professor: Do you hear that sound a? It is a complete word, complete sound. So, how we write is not important. We started with what I just told you, A for Apple and B for Boy does not mean much. So, how we write is a completely different convention and is a completely different system of learning. However, spoken language is different, when we look at these fundamental aspects. Get this. Any questions so far? No. Are these things making sense, clear? I have two more minutes to show you something.

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Vowels		
	Short	Long
Back	a	aa
Mid	i	ii
Front	u	uu



Some examples of vowel sounds. These are not all, there are some examples of vowel sounds, they are, a, aa, i, ii, u and uu. So, one is a is a short vowel and its counterpart aa is a longer than that. When we say longer we mean relatively longer than a, when we say i, the distinction between i and ii is again relative a distinction, one is shorter, the other is longer. And finally, the vowel sound u has a similar distinction between short and long.

What is another interesting point with these vowels is a, what would be the place of articulation for a in the oral cavity? That is to say, if we divide it in, let us say three parts vertically, if we divide this in three parts vertically and we say front part, mid part, and back part. So, a will be?

Student: **Back part.**

Professor: Therefore, that is **called a back vowel, ii relative to u mid vowel**, not just because it is written here, I want you to realize that and when we say **uu that is the front vowel**. Say this thing. Now, this distinction that you see, first, there are two things I will say before I stop for today. This distinction that you see, front, back and mid, these are called on vertical axis places of articulations. And if one is short, the other is long, that is about the manner of articulation. That is how these things are said, number one.

Number two, this distinction is not a new thing that I am giving you. Do you know when this distinction was first brought to attention? Any idea? So naturally, you do not know who did that? Have you heard the name of Panini? Anybody?

Student: ((??)) (48:40)

Professor: Oh, he heard that, Panini. So, when did he live?

Student: ((??)) (48:46)

Professor: Sorry. Say something. When did he live? He, according to some estimates, he lived around 500 BC, which is how many years from now? 2500 years. The point is, it is not 10 years ago. It was not published in science or somewhere else. Do you know, do you guys know the era of invention for printing press?

Student: Around 15 to 16.

Professor: It was around French Revolution. These things were done way before any machine, sophisticated machines like the ones that we see were developed or even printing press or papers were in place. This was just somebody's observation, which is absolutely accurate with all kinds of mechanical apparatus even today. **There is no dispute that uu is a front vowel.**

Of course, mid, back, front, these are English terminology, Panini had different terms for them. He did not talk about mid, back and front, he talked about the same thing in different languages of his time. But these distinctions were done long time ago. There is nothing new about them. And the second thing is, these vowels are called Cardinal vowels. And they are not the vowels of Hindi or Tamil, these vowels are available in all the languages of the world. This distinction of a and aa, i and ii, and u and uu is done in all the languages of the world.

Probably some of the languages are dead from Paninian time, some of the languages did not even exist, for example, modern spoken Hindi, and modern spoken English were definitely not there at that time. So, what he was talking about was true for Languages of that time, true for languages that may have died, true for languages that did not even exist. See the power of that argument, see the power of that classification that someone came up with 2500 years ago.

There are a couple of other things about consonants that he has given, he has talked about, and the picture that I was trying to show you, the story that I told you about exhaling air as being responsible for production of speech sounds, the distinction between oral cavity and nasal cavity, how the oral sounds are produced and the nasal sounds are produced, all of them were discussed by Panini. There is nothing new in those things, it is just that these stories

have been told in different languages at different points in time. We talk about the consonant part next time when we meet. Thank you.