The interaction between the student and the study material when learning a music instrument over the internet

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E-learning and music education – what are the experiences so far?

- Berklee College of Music in Boston 8000 enrolled online students in 2008 (Schlager 2008)
- University of Northern Iowa: project in 1993 with cable to 99 county-schools. Masterclasses and group lessons.
- Manhattan School of Music 1700 students from year 2000 in 25 states. *Real time!*
- Gibson's online lessons since 2006
- Hundreds of non-professional websites

What are the most often mentioned benefits of e-learning?

- •Big amount of students
- •Low costs
- •Interaction between students (an online community)
- •People in distant areas have equal chances
- •Continuing education for teachers

Do we need e-learning at all?

There are piles of books and journal articles discussing the pros and contras of e-learning, but we must not forget the fact that e-learning exists already!

E-learning is already an integral part of economy!

It is too late to discuss whether to have it or not, now it is time to get the best out of it!

To use the ICT for educational purposes is one of the best options available.

E-learning doesn't exist only in the official educational systems but people use the internet to learn the most different things (from fixing a car to playing the guitar!) every day.

What are the general problems of e-learning?

- Lack of personal contact
- Quality of education can suffer (and the market won't regulate that because students cannot evaluate the quality properly (Smith, Mitry 2006))
- Communication isn't always a benefit and can spend time (Thorpe, Godwin 2006)
- Against traditions (in studies of classical music it can be very important!)
- Problems caused by the environment internet

What is an interaction?

• When all parties of the communication process influence each other, then they INTERACT



Three types of interaction

- Teacher-student interaction
- Student-student interaction
- Student-study material interaction (Moore, 1989)

4th type: Teacher-student interaction - it is very important, too, but the problems are similar to the student-study material interaction.

Different study models employ different types of interaction

- The traditional individual music lesson has an emphasis on the **teacher-student interaction** the information flows in a spiral manner.
- In a group lesson the student-student interaction comes into effect, too.
- Student-study material interaction is possible when the study material is interactive. In elearning this is the most influenceable type of interaction.

The levels of interaction in a study material

- The level of interaction between student and study material can **vary**
- On the basis of the possibilities of a student to lead the flow of information in an electronic study material it is common to talk about 4 levels of

interaction.

Levels of interaction: Level 1

- The material is mostly passive
- A student has **limited possibilities** to lead the flow of information
- It is a direct display of information using the ICT tools
- No feedback or limited feedback
- Linear, a student cannot change the order of upcoming bits of information

Levels of interaction: Level 1 – when to use?

- With limited resources of money/time etc
- The goal is just to make the information available to the students
- The information is a description of something

Levels of interaction: Level 2

- Active learning
- Student leads the material
- Simple non-linear structures (multiple choices)
- Material gives feedback
- Student has a chance to demonstrate her/his skills
- Multiple choice questions
- Simple tests, games
- Examples of real situations

Levels of interaction: Level 2 – when to use?

- The main body of information consists of certain rules
- When the material requires practicing
- When it is necessary for the student to use the material several times

Levels of interaction Level 3

- Active learning
- Student can lead the flow of information much more
- Non-linear structure
- Student has to make decisions
- Content is displayed in realistic contexts
- Flexible navigation
- Extensive use of graphics and photos
- Animations (narrative and interactive)

Levels of interaction: Level 3 – when to use?

- When it is necessary to learn to make decisions
- Multidimensional problems
- Real-life situations
- Material needs practicing
- Complicated scenarios

Levels of interaction: Level 4

- High-level active study
- Student has full control over the material
- Non-linear presenting, multiple scenarios
- Needs complex decisions
- Possibility of correcting mistakes and trying again
- Student can see the causes of his/her decisions
- It is a simulation of a work-place

Levels of interaction: Level 4 – when to use?

- When it is needed to develop the ability of making decisions
- Highly realistic subject
- Variable problems
- A "sandbox" to practice (aviation, medicine etc)

How much interaction do we need?

- Too much interaction may result in loss of concentration
- Too little interaction may reduce the motivation
- Different subjects demand different levels of interaction!
- The amount of interaction should be kept as low as possible but as big as needed

Examples of extreme conditions of interaction

- Studying the guitar from a textbook with no illustrations too low level of interaction
- Studying the guitar from a fully animated 3D material with all possible multimedia options (sounds, music, video, animated tables, etc) too high level of interaction.

Real life examples of both conditions exist!

Possible reasons for having an extreme level of interaction

- Marketing on macro-level: many professional (and also non-professional!) educators and institutions depend on their clients students
- Marketing on micro-level: studying alone with a computer can reduce the motivation. To maintain the motivation of the student, some marketing and seduction in the material is required. Sometimes the marketing and the quality of a study material are not balanced.
- Unprofessional educators hobby players teach each other.

How to find the optimal level of interaction?

- Define the problems first!
- A solid theory
- Research in this field (studying a musical instrument over the internet) almost **doesn't exist**
- Practice in this field does exist!

Problems with the theory

- Research in the field of e-learning gives useful but too general information
- Most of the studies concerning the e-learning and music education are dealing with continuing education which means that the students are not beginners
- Many studies that deal more specifically with the actual problems of the learning process in elearning music run the experiments only with theoretical subjects (music theory, reading music)
- Playing a musical instrument is an action not theory!

Cognitive load theory

- CLT suggests that many instructional designs are ineffective because they ignore universal and fundamental aspects of cognition (Sweller, 2008)
- CLT has 3 components: cognitive architecture (long-term and short-term memory), 3 categories of CLT (intrinsic, extraneous, germane) and CLT effects (split attention, modality effect)

Examples of the CLT

- A teacher tries to explain what is a square. He can pass the information with just talking (high extraneous load) or draw the square on the blackboard (low load). Intrinsic load is the same.
- An information is given from many different channels at the same time: *notation, tabulature, audio, video, animation, multiple choices in menu etc.* It causes again a high extraneous load and reduces the chances that useful data is stored in long-term memory.

CLT and playing a musical instrument

• The principles of CLT are used in every-day practicing no matter do we know about this theory or not — we know that it is not possible to concentrate on many things at the same time, we know that it is easier to memorize music when it is not split to too many pages and we know that a guitar player must use all his cognitive processes to be able to play at all.

Is internet an independent environment?

- It is not the same if a student studies from regular textbook or from an electronic material that is displayed on a TV screen or over the internet.
- It may be that the presence of different environments at the same time can reduce the concentration or in other words cause the split attention effect

Finding the optimal balance

- In conclusion the balance must be established between the different environments
- The choice of the channels to process the information must be considered carefully
- The choice of channels differs: the type of information dictates which channels are used
- Also, the visual appearance of materials must be balanced with the actual information
- Less information at the time may be superior to the overflow of information

My experiments

- Pre-test post-test 2 group experiments
- Two conditions:
 - 1. Studying over the internet vs textbook+CDR
 - 2. Studying over the internet in different language –
 the role of written text in electronic study materials
 - 3. Experimenting with the environment

The Kitarrikool (Guitar School) project

- Group lessons
- E-learning
- Textbook
- All combinations
- approx 3000 registred web-school users
- approx 1000 book-users
- approx 500 students have passed the group courses
- to compare: in Estonian official music schools we have about 800 guitar students altogether

Examples 1

• The website Kitarrikool.eu





Have you ever studied in a music school?

Yes (10 / 27.8 %)

No, but I wanted (11 / 30.6 %)

No (15 / 41.7 %)

RECENT FORUM POSTS

How to learn by ear?

⊞ь Hi

Guitar school Talk / General guitar talk

You can start learning now! Online course / I level





Starting an online course

Is it really possible to learn to play the guitar over the Internet?! Read about our courses, explore how the studies have been structured and then decide for yourself if you are capable of learning this way. Quite a few people have bought a guitar

instruction book wishing to learn to play the instrument at least a little but only the most strong-willed are able to achieve something in this way. The problem does not lie in poor instruction books but in the fact that books do not give feedback, do not let you know whether you are on the right track or have already lost your way.

- » Group courses started!
- » Estonian Folk Tunes for the Guitar a new book from Kitarrikool
- » The official opening of the kitarrikool.eu was on 29th of May
- » PRESS RELEASE Estonians start an intelligent and interactive guitar tuition!
- » Who wants to study guitar in Tallinn?
- » Registering to the group courses has started!

News »

Estonian Folk Tunes for the Guitar - a new book from Kitarrikool

Kitarrikool Publishing starts a new series of guitar tutor books with Kristo Kāo's "Estonian Folk Tunes for Guitar". The idea of the book series is to teach and entertrain at the same time. If you are not a guitarist then you can...



NEWS

Estonian blues EP by Bullfrog Brown was chosen #1 in Europe

The Canadian web magazine Blues Underground Network chose Bullfrog Brown's EP "Mother River Delta" to be the best European blues album of 2008. The best US release was The Mannish Boys' "Lowdown Feelin" and the best Canadian was...



Tallinn Guitar Quartet

The front page with news, upcoming

events, articles, poll,

recent forum posts and the chord of the week

12. March (20:00) Rundetårns Bibliotekssal, Copenhagen (DK)

Heiki Mätlik, Julia Kahro, Kristo Käo og Jorma Puusaag Works by: J.S. Bach, Leo Brouwer and Timo Steiner

Roland Liiv (tenor), Kristo Käo (guitar)

26. March (18:00) Haademeeste (EST)

Program: Spanish, Russian and French songs. The concert series of Pille Lill Foundation

Tallinn Guitar Quartet

17. June (18:00) Suure-Jaani

Heiki Mätlik, Kristo Käo, Jorma Puusaag, Julia Kahro. The festival of Suure-Jaani: Estonian Academy of Music 901

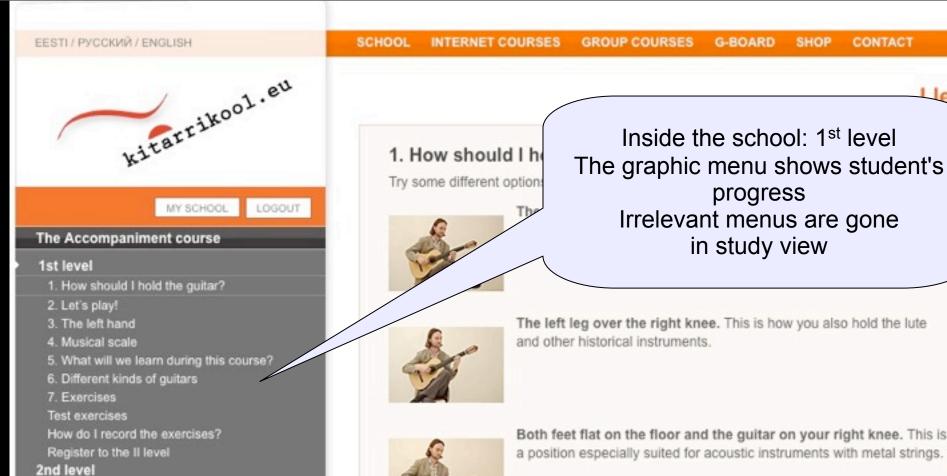
The Dance Album

28. June (18:00) Pärnu (EST)

Kristo Käo (guitar, lute), Maria Rääk (choreography, dance). Music from the CD "The Dance Album" Organizer:

Studying the guitar over the Internet

Is it really possible to learn to play the guitar over the Internet?! Read about our courses, explore



The left leg over the right knee. This is how you also hold the lute

SHOP

CONTACT

level



Both feet flat on the floor and the guitar on your right knee. This is a position especially suited for acoustic instruments with metal strings.



There are a number of aids helping you to hold the instrument in a way similar to the classical position: guitar supports. A guitar support is attached to the guitar with a suction cup. There is a wide range of them available.

In general it can be said that all positions are united by one common and very important feature - the left hand is free and does not support the guitar! And the most important thing is feeling comfortable.

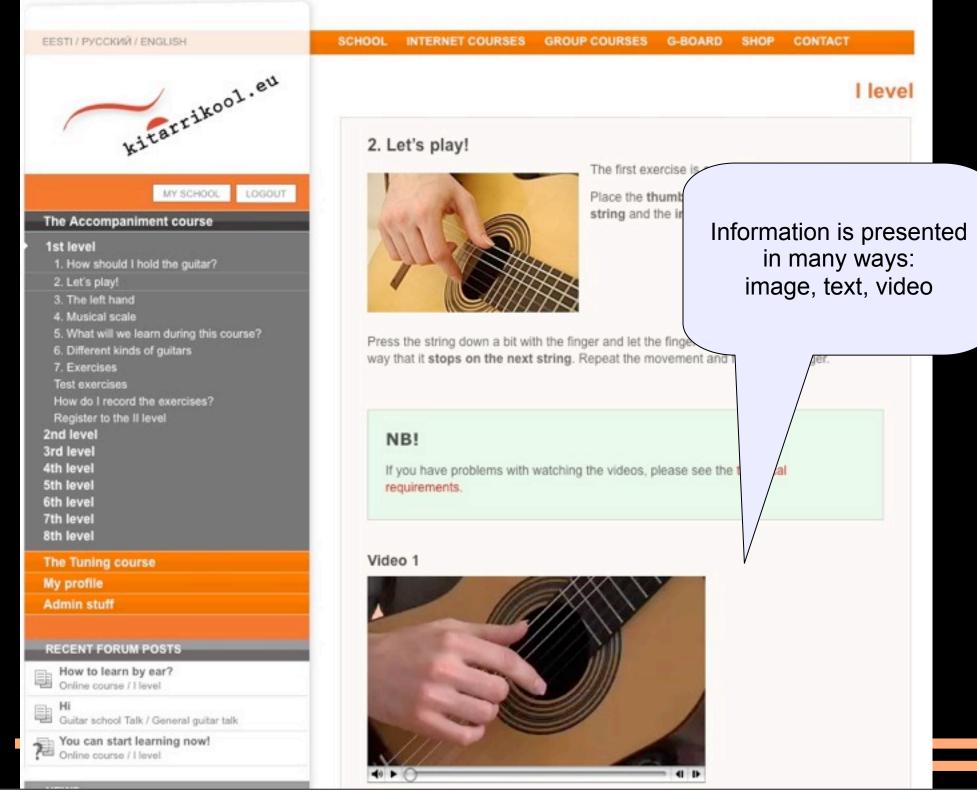
3rd level 4th level 5th level 6th level

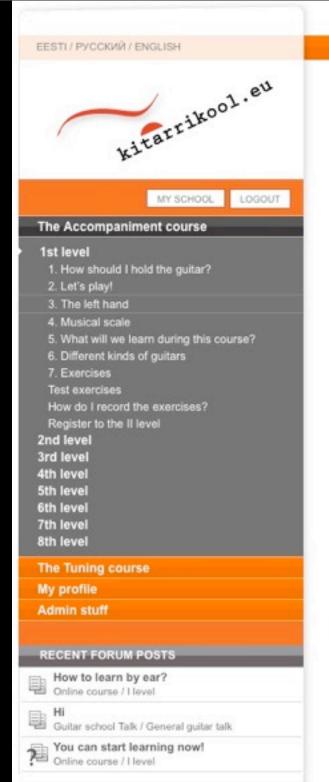
7th level

8th level

My profile Admin stuff

The Tuning course





SCHOOL INTERNET COURSES **GROUP COURSES** G-BOARD SHOP

3. The left hand



The view from different angles can help but not always

CONTACT

circle

supporting the back of the nd the finger is pressing down the n the fretboard.

No other area of the hand should touch the guitar! You have to press with the tip of the finger as close to the fret strip as possible.

The fret strips or just frets are the metal strips on the neck of the guitar.

So - the 3rd string has been pressed down at the II fret. Now play with the right hand (alternating the fingers!) on the third string for 4 times. Then lift the left hand's finger about a centimeter above the string and play once again for 4 times.

Repeat this exercise and follow the work of both hands. The thumb of the right hand must still lie on the 6th string and i-m fingers must alternately pick the string. Try to play with a precise rhythm!





5th level 6th level 7th level 8th level

The Tuning course

My profile

Admin stuff

RECENT FORUM POSTS



How to learn by ear?
Online course / Hevel



Guitar school Talk / General guitar talk



You can start learning now! Online course / I level

NEWS

- » Starting an online course
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In general it can be said that all positions are feature - the left hand is free and does not s thing is feeling comfortable.

A series of cartoons make a family of different characters



Kristo can tell you whatever he wants but do not forget - THE MAIN THING IS TO LOOK GOOD WHILE PLAYING!

Continue: 2. Let's play!





llevel

When beginning to learn notation, the key scale should be very close, otherwise we'll have the split attention effect

7. Exercises

Test exercises

How do I record the exercises?

Register to the II level

2nd level

3rd level

4th level

5th level

6th level

7th level

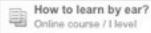
8th level

The Tuning course

My profile

Admin stuff

RECENT FORUM POSTS





Guitar school Talk / General guitar talk



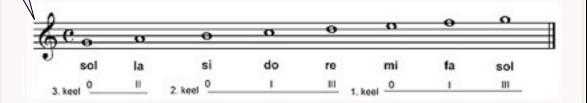
You can start learning now! Online course / I level

7. Exercises

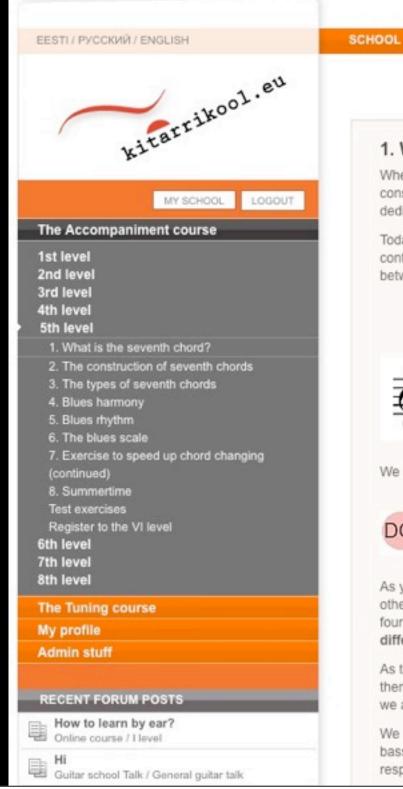
Let us get to the melodies. The following task is to play a simple melody based on a folk song. It consists of only four different notes and you have been playing all of those notes already a number of times today.



If you follow the table of notes you will find that the first note of this melody is SI and it is on the open 2nd string. You could continue thinking like this: the next note is 2 steps higher than the previous one, therefore it is the III fret of the 2nd string (RE). Counting steps up and down in this way helps you find the notes easily. Of course to do that you need to know the scale we learned by heart. In the beginning you can also use the table to help you find the locations of the notes.



The next important thing is the rhythm. This melody has three types of note lengths. The first notes last half a beat, then come a few one-beat notes and at the end of the melody there are also three-beat notes. Mathematics will not help you much here. Better listen to how the melody should sound. Play very slowly in the beginning!



G-BOARD

GROUP COURSES

1. What is the seventh chord?

INTERNET COURSES

When we started to speak about chords, we of construction: triads, seventh chords and ext dedicated to triads.

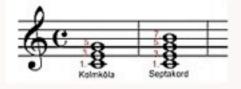
Today we'll learn about the next category of c contains three different notes, the seventh ch between the two. The abstract notation is doubled with graphics

d on their ons were

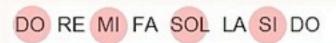
5th level

CONTACT

triad ifference



We can also picture the seventh chord in the following way:



As you know chords are made up of **thirds**. The triad contains two thirds on top of each other and **the seventh chord** three thirds As thirds can be either major or minor, there exist four different ways of constructing triads. **Seventh chords are constructed in eight different ways**. However, for now we will only encounter three different seventh chords.

As there are already quite a few thirds in the seventh chord, it makes no sense to discuss them separately – what matters is **the first third** because this is what determines whether we are dealing with a major or a minor chord.

We now encounter a new interval – a seventh. A seventh is the seventh note from the bass. It can also be either major or minor. The major and minor seventh are abbreviated respectively as M7 and m7.

Examples 2

• The textbook: Kristo Käo's "Guitar School – the key to the practical guitar playing" (Kitarrikool Publishing 2007)

I LEVEL

Text+image

1. How should I hold the guitar?

The guitar can be held in very different ways depending on the size and type of instrument and the aims of the player. Try some different options and decide for your which of them is best suited to you.

a) Classical position – the guitar rests on your left knee and the leg is supported by a footstool. This position will be necessary when you want to play already relatively complicated classical music, but some simply prefer sitting like this.



FIGURE 1



b) The right leg over the left knee. This is how for instance flamenco guitarists hold the guitar. The leg gets tired after a while but one can get used to the position.

FIGURE 2

c) The left leg over the right knee. This is also how you hold the lute and other historical instruments.



FIGURE 3

II LEVEL

PILT 28

The information is presented in 2 ways:

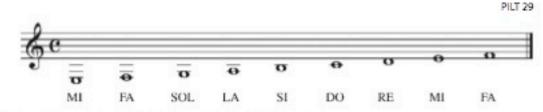
- 1. Graphic
- 2. Notation

cale on the bass strings

played all the notes of the 1st position on the bass strings. You can see arizing the I position notes on the basses on the following illustration:

Try combine these notes into one **scale**. Start with the open 6th string and finish on the fret of the 4th string. Play all notes twice and when you reach the last note, play the rotes backwards.

Written down in **standard notation** the scale on the basses looks like this. Learn the names of the notes!



Written down in tab form this scale looks like this:

PILT 30

The illustrations should be relevant and connected to the text

II LEVEL

6. Tuning the guitar

The guitar is an instrument that unfortunately doesn't stay in tune for a longer time. The guitar must always be tuned before starting to play and often also while playing. Metalstringed guitars stay in tune better while the tension of nylon strings is less stable.

You have learned the names of the notes on the open strings. If you have any other instrument that is reliably in tune (a piano,

an accordion), you can tune the open strings with its help. But it is also possible to tune without any other instrument.

You usually start by tuning the thinnest string – the 1st string. **The first string** must be **MI**.



The same applies to practicing an instrument. Therefore: you will learn the fastest if you concentrate on your practicing and try to avoid mistakes. This means not playing false notes and sloppy rhythms. Practicing is really a whole science in itself and at this point I'd simply like you to occasionally think of what you are doing while practicing.

Sometimes it's necessary to practice **VERY SLOWLY** in order to have the time to follow each of your movements! It's good to constantly repeat everything you learned at the first two levels as at the next level the amount of information is already much greater and then we will already get to chords.

Saksamaal valmis uurimus, millest selgus, et kõik professionaa on oma õpingute jooksul pilli harjutanud u. 10 000 tundi vanuses 6 – 25 aastat. See teeb päevas keskmiselt poolteist Cartoons and textblocks try to make the atmosphere more friendly



Algul harjutad nagu peab, pärast mängid kasvõi pea peal :)

ka tarikoni

III LEVEI

Table of contents is similar to the web

What is a chord and does it bite?

We are now getting to the real aim of the course – to find out what are **chords**, how to produce and play them yourself. We'll get acquainted with the types of chords and find out what is **arpeggio**.

Why does some chord sound **cheerful** and another **melancholy**? What is a **"three chord song"**? If all you're interested in is singing with your friends around a fire, then we can say goodbye after this level has been completed! But if you have had enough of playing just three chords, we'll of course continue.

III level

- 1. Free stroke
- 2. Arpeggio
- 3. What is a chord?
- 4. Major and minor
- 5. How to play triads on a guitar?
- The work of the right hand in playing a chord
- 7. Getting on with the triads!
- 8. The designation of triads
- 9. Exercises
- 10. Advice on practicing changing chords

Test exercises



The movement should be like a hand **turning in a sleeve**. From the wrist on the hand remains still. The entire position of the hand should be as stable as prenabling the player to move the finger quickly back to the original position. If yo back to some music video you've seen, you might remember a sight where the gis, waving" the right arm all the way from the elbow – why not, provided you denough! In fact the techniques of playing any instrument have developed the years to become **as economical as possible**. If a musician with a great the playing, it always seems so very simple and easy!

The symbol of a video example

NB! Though it may be hard to see it on the video, only the i-finger is touching the strings!

In the beginning the right hand works just like this when playing chords. Later we'll find out about many other options. We actually started this lesson with arpeggio, also one possible way of making the notes in the chord sound, but we will return to it later. In different chords you need to strike a different number of strings – sometimes 4, sometimes 5 and sometimes all 6 strings.

As we already mentioned, you can use a pick to strike the chords. Nylon-stringed guitars however do not have pickguards, so be careful, you are in danger of scratching your instrument:)

No ütle kas Jimi Hendrixit huvitas, et pill oleks sirgelt käes ja käsi käiks "ökonoomselt"?! Muuseas, ma jätan teooria sirgelt vahele - Kidrakooli vanakesed ei saa arugi :P



kitariko

- Medium barre (3 to 4 strings at the same time)???
- Large barre (5 to 6 strings at the same time)

Learning the barre technique takes a few months, provided you train conscience Start with this exercise:

Place the straight 1st finger over all strings at the V fret, but without pressing down the string. Barre with the side of the finger that lies towards the thumb.

PILT 88

Information is presented in 3 ways:

- 1. Image
- 2. Audio
- 3. Graphic

Now **strum the strings with the right hand**, simultaneously **pressing down the with the left hand**. Do this **four times** in a row. Then move the barre to the IV do the same, continue on the III fret, etc. – all the way to the I fret.

It is important to **release the tension** while changing position. This is the most efficient way of training the finger muscles. You cannot do this exercise for too long because the muscle gets tired. Do it a few times and rest, you can continue the next day.

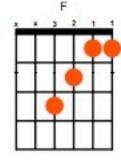
How the exercise sounds is not in itself important, but make sure all strings are **pressed down** and sound as they should! Provided you do the exercise correctly, this is what you should hear:

A HELINĂIDE 2

If the large barre still seems too hard to play, you can finger F also in another way:

PILT 89

This way of playing F uses **small barre** with the 1st finger pressing down **two strings at once**. Still with the side of the finger that lies towards the thumb but this time **the finger is no longer straight** but bent from the top joint!



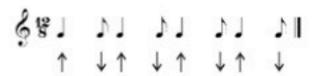
V LEVEL

5. Blues rhythm

Major blues has its own specific **rhythm** that is almost always the same. In this sample you will hear **A**, for a few bars and **E**, at the end:



The right hand is moving **up and down** and the first strum is always **twice** a the second. Written down this rhythm looks like that:



Strumming from the basses towards the trebles, try to hit all chord sounds (fix strings for A, and B, six strings for E,) with your right hand. When strumming upward it is enough to touch three strings. In this way the stress falls where necessary. The beginnings of bars and harmony changes are also more stressed.

A similar irregular rhythm, also called **the swing rhythm** (it is a bit faster in swing bu basically the same), is used in playing the melody and the solo of blues tunes. Sometime it is indicated at the beginning of sheet music but usually you are expected to know i yourself. **The rhythm of blues melodies is generally quite free** and you're definitely not expected to play exactly as it is written down.

Blues is not a very sheet music-friendly musical style. It is wiser to play it by ear.

I'm a King Bee harmony sounds like this (the second guitar is playing the melody but you should concentrate on the chords):



Information is presented in 3 ways:

- 1. Rhytmic notation
 - 2. Video
 - 3. Audio

there are:

- Triads (3 notes)
- Seventh chords (4 notes)
- Extended chords (5-7 chords)

Everything shouldn't be too straight – what is a guitar students' "desired goal?" Stairway to Heaven, of course!

Then we divided chords into two groups on the basis of the way they guitar and we found out that there are:

played on the

- Open position chords (with open strings)
- Movable chords (without open strings)

Why do we need to know that? Classification is necessary to simplify the learning process, enabling you to move step by step towards your desired goals:



When accompanying any tune with chords you **don't have to** think about which category some chord belongs to, as long as you know how to play the chord. If, however, you want to learn how **to improvise an accompaniment** to some melody yourself or how **to play a solo**, knowing all we have learned will only help you.

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