# INTERACTIVE METHODS IN RUBAB EDUCATION: INNOVATIVE TECHNOLOGIES AND STUDENT-CENTERED LEARNING




**Niyazova Sabohat**
Teacher, Department of "Maqom Instrumental Performance",
Institute of Uzbek National Musical Art named after Yunus Rajabi, Tashkent, Republic of Uzbekistan
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***Abstract.*** *This article considers how interactive teaching methods can be used in rubab education and how traditional instrumental pedagogy can be brought together with present-day educational technology. We look at what student-centred learning, multimedia materials, digital recording, interactive exercises, joint performance and online platforms can contribute to the formation of instrumental skills. Attention is drawn to the weak points of purely teacher-centred instruction and to the need for students to take an active part in their own learning, to work independently and to think creatively. A five-stage interactive model is proposed: demonstration, guided practice, digital analysis, collaborative learning and independent performance. We also discuss how technical progress can be assessed with the help of audiovisual feedback and clearly structured criteria. Interactive methods, as we see them, should add to traditional master–apprentice teaching, not replace it. Used in this way, they can raise motivation, technical accuracy and the quality of musical interpretation, make students more independent, and support both the preservation and the further development of Uzbek rubab performance.*

***Keywords:*** *interactive education, rubab, innovative pedagogy, digital technologies, student-centered learning, multimedia, instrumental performance.*

## Introduction

Music education keeps changing, and teaching methods for instruments have to change with it. The traditional elements of the lesson, namely individual work, the teacher's demonstration and repeated practice, are still indispensable. Yet new educational technologies and the different ways today's students are used to learning open up chances to make instrumental teaching more effective.

Interactive education is one such direction. It is built on active participation, communication, cooperation, practical trial and error, and regular feedback. Where a purely teacher-centred lesson treats the student as a receiver, the interactive lesson treats him or her as a participant who contributes to the learning process.

For the rubab this is especially relevant. Playing the instrument requires physical coordination, hearing, musical memory, analytical thinking and artistic independence to develop at the same time. Traditional rubab teaching has real strengths, the transmission of performance traditions through the ustoz-shogird system above all. Even so, students can gain much from additional resources: recorded demonstrations, digital exercises, audiovisual analysis and work in

groups.

Recent research on technology-enhanced music learning names constructivist and student-centred approaches as important parts of contemporary music education (Mohammadian, Pourroostaei Ardakani, & Zaraii Zavaraki, 2026). Our aim in this article is to outline a methodological framework for bringing interactive approaches into rubab teaching without weakening the traditional artistic basis on which instrumental education rests.

The underlying idea of interactive education is simple: knowledge is built through active engagement, not received passively. For an instrumentalist this means that copying the teacher is not enough. The student should also observe, analyse, compare, try things out, evaluate his or her own playing and correct it without waiting to be told.

**Limitations of Conventional Teaching Methods**

Individual instrumental lessons have always depended on direct contact between teacher and student. Without it, neither technical problems can be corrected properly nor stylistic knowledge passed on. Problems arise, however, when the whole learning process rests on the teacher demonstrating and the student imitating.

Several of these problems are familiar to any teacher. Students may come to depend too much on the teacher's interpretation. Lesson time is short, so there is little chance to go over the same material and analyse it repeatedly. Students do not always hear their own technical mistakes. And home practice loses much of its value when the student has no clear goals and no feedback. Interactive methods can ease these difficulties because they extend learning beyond the walls of the individual lesson.

With digital recordings, online resources, group tasks and self-assessment, students can keep working on specific performance problems on their own. Digital technology clearly offers further possibilities for developing instrumental skills. But a tool should be chosen for its pedagogical purpose, not simply because it happens to be at hand.

The teacher can, for example, record short videos showing particular techniques, such as:

- correct position of the instrument;
- holding the plectrum;
- alternating plectrum strokes;
- left-hand fingering;
- rhythmic patterns;
- ornamentation;
- interpretation of selected pieces.

Students watch the videos at home and compare their own movements with the teacher's. This works particularly well for movements that have to be observed many times before they are understood.

Audio recording lets students judge their own sound and rhythmic accuracy. One practical exercise is to record the same passage at different stages of preparation. Comparing these recordings, students can hear what has improved and which technical problems remain. The teacher may ask them to listen for:

1. rhythmic stability;
2. clarity of articulation;
3. evenness of sound;
4. dynamic control;
5. accuracy of the melodic line.

Video is useful for studying the movements of the hands. Slowed-down playback helps

students see how the plectrum and the left hand work together, and it reveals needless movements, excess tension and faulty hand positions. Digital notation programmes and audio libraries can also support work on repertoire: with digital scores, annotated passages and recorded performances, students can see how what is written relates to what is actually played.

**A Proposed Interactive Model for Rubab Education**

We propose the following five-stage model for use in specialized music schools and higher education institutions:

1. Stage 1. Demonstration

The teacher presents the piece and shows its technical and artistic features.

2. Stage 2. Guided practice

Under the teacher's supervision, students practise particular technical elements.

3. Stage 3. Digital analysis

Students record themselves and analyse their technical and musical progress.

4. Stage 4. Collaborative learning

Students give each other feedback, compare interpretations and play in small groups.

5. Stage 5. Independent performance

Students prepare and present their own interpretation of the chosen piece.

The model links direct instruction with active participation by the students. Its chief advantage, in our view, is that classroom work, independent practice and artistic evaluation become one continuous process instead of three separate activities.

**Practical Application: An Interactive Lesson**

To show how the method works, we describe a 40-minute rubab lesson.

| Lesson activity | Duration | Method |
|---|---|---|
| Introduction and objectives | 5 min | Discussion |
| Teacher demonstration | 5 min | Practical demonstration |
| Technical exercises | 5 min | Guided practice |
| Repertoire study | 10 min | Individual work |
| Recording and analysis | 5 min | Digital feedback |
| Group evaluation | 5 min | Peer assessment |
| Final performance | 5 min | Independent presentation |
| Total | 40 min | |

The teacher chooses a piece that matches the students' technical level. At the first stage the structure of the music, its stylistic features and the main technical difficulties are explained. The students then practise selected passages and record themselves. The recordings are discussed together, with the focus on rhythmic accuracy, sound production and articulation.

A key part of this work is the conscious development of sound production. Abdurashidova (2025), in her study of methods of sound production and their notation in dutar playing, shows how useful it is to explain instrumental techniques both through demonstration and in written form. The same can be done in the rubab class. Students watch the teacher, compare different ways of producing sound and discuss how a technical choice changes tone and expression. In this way they begin to understand the link between technique and the resulting sound, rather than just copying movements.

Comparative listening also fits naturally into such a lesson. Students might, for instance, listen to examples from different musical cultures and talk about what is characteristic of each. Makharov et al. (2025), writing on cooperation between Uzbek and Kuwaiti composers, point to

the role of intercultural exchange in widening musical horizons. In the rubab class this idea can be applied by studying contrasting interpretations, which helps students hear stylistic differences and think about new ways of presenting traditional repertoire.

The lesson ends with individual performances and constructive comments. Students assess their own recordings, decide what still needs work and receive advice from the teacher and from classmates. Built this way, the lesson becomes more participatory and assessment becomes continuous. It also ties technical progress to critical listening, independent thinking and a broader cultural outlook.

**Evaluation of Interactive Learning Outcomes**

Whether interactive teaching actually works has to be judged by measurable indicators, covering both technical growth and wider musical competencies. Assessment should not stop at the final performance. Progress during lessons, the ability to analyse musical material, participation in group work and the capacity to learn independently all deserve to be taken into account.

| Competency | Evaluation method |
|---|---|
| Technical proficiency | Practical performance |
| Plectrum coordination | Technical exercises |
| Rhythmic accuracy | Recording analysis |
| Musical interpretation | Performance assessment |
| Analytical abilities | Oral discussion |
| Collaborative skills | Group assignments |
| Independent learning | Individual projects |

Each indicator needs clearly defined criteria. Technical proficiency, for example, may include accurate fingering, control of the plectrum, quality of sound and freedom from unnecessary tension. Musical interpretation covers phrasing, dynamics, articulation, stylistic awareness and the ability to convey the character of a piece. In group work the teacher looks at participation, communication, readiness to share ideas and willingness to give constructive feedback.

Formative assessment gives students continuous feedback while they learn; summative assessment sums up what they have achieved by the end of a course or semester. We also recommend that each student keep a digital portfolio with selected recordings, short reflections on performances and completed assignments.

**Conclusion**

Interactive methods give rubab teaching real room for improvement. Audiovisual materials, digital recording, group work, peer assessment and problem-based tasks can increase student participation and encourage independent learning.

The five-stage model links the teacher's demonstration, guided practice, digital analysis, group activities and individual performance into one structured sequence. This does not mean, however, that interactive education should take the place of traditional instrumental teaching.

The ustoz-shogird tradition remains essential for handing on the artistic and stylistic qualities of Uzbek rubab playing. The most promising strategy is therefore an integrated one, in which traditional teaching principles are enriched by carefully chosen modern technologies. Teaching of this kind can help to form rubab players who are technically secure, culturally informed and independent in their artistic thinking.

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