

**METHODOLOGY FOR TEACHING STUDENTS NATIONAL INSTRUMENTS IN CIRCLE TRAINING.**

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**Annotation.** This article presents a methodology for effectively teaching students National Instruments (NI) technology through a circle training approach. Circle training integrates theoretical knowledge with practical application, fostering a deeper understanding and skill development among students. By incorporating this methodology, educators can optimize student engagement and proficiency in utilizing National Instruments tools for various engineering applications.

**Keywords:** National Instruments, Circle Training, Teaching Methodology, Student Engagement, Active Learning

National Instruments (NI) offers a diverse range of tools and platforms for engineering and scientific applications, making it an essential skill set for students pursuing careers in these fields. However, teaching National Instruments effectively requires more than just lectures; it demands engaging methodologies that foster active learning and practical skills development. Circle training, a collaborative learning approach, has emerged as a promising method to enhance student comprehension and retention. This article explores the integration of circle training methodology in teaching National Instruments to students, highlighting its benefits, methodologies, and outcomes.

Prior research on educational methodologies has emphasized the importance of active learning in enhancing student understanding and skills acquisition. Circle training, also known as cooperative learning, encourages collaboration, discussion, and peer teaching, which are essential components of effective learning experiences. Studies have shown that circle training promotes deeper understanding, increased motivation, and improved problem-solving abilities among students. However, its application in teaching National Instruments specifically remains relatively unexplored.

Incorporating circle training into the teaching of National Instruments involves several steps:

- Preparation: Designing lesson plans and materials that facilitate collaborative learning.
- Formation of Circles: Organizing students into small groups to encourage interaction and teamwork.

- Engagement Activities: Introducing hands-on exercises, case studies, and real-world projects to apply National Instruments concepts.
- Facilitation: Guiding discussions, providing support, and fostering a conducive learning environment.
- Reflection: Encouraging students to reflect on their learning experiences and share insights with the class.

Teaching students National Instruments (NI) tools and technologies, such as LabVIEW, in a circle training setting can be an effective way to facilitate learning and collaboration among participants. Here's a suggested methodology for conducting such training:

- Assessment of Participants' Background: Before starting the training, assess the participants' backgrounds and familiarity with National Instruments tools. This will help tailor the training content to their skill levels and learning needs.
- Set Learning Objectives: Clearly define the learning objectives for the training program. These objectives should outline what participants are expected to learn by the end of the training session(s). Examples of learning objectives might include understanding the basics of LabVIEW programming, learning how to use specific National Instruments hardware, or mastering advanced features of National Instruments software.
- Curriculum Design: Develop a comprehensive curriculum that covers the key topics and skills related to National Instruments tools. Organize the curriculum into logical modules or units, with each module focusing on specific concepts or functionalities. Make sure the curriculum is structured in a way that builds upon previous knowledge and gradually increases in complexity.
- Interactive Lectures: Conduct interactive lectures to introduce participants to the core concepts and principles of National Instruments tools. Use multimedia presentations, demonstrations, and hands-on examples to make the content engaging and accessible. Encourage participants to ask questions and participate in discussions to promote active learning.
- Hands-on Practice: Provide ample opportunities for participants to practice using National Instruments tools through hands-on exercises and activities. Set up lab sessions where participants can work on assigned tasks or projects under the guidance of instructors. Encourage peer collaboration and problem-solving during these practice sessions.
- Project Work: Incorporate project-based learning into the training program, where participants can apply their skills and knowledge to real-world projects or case studies. Assign projects that require participants to design, develop, and

implement solutions using National Instruments tools, and provide guidance and feedback throughout the project lifecycle.

- **Assessment and Feedback:** Assess participants' learning progress through quizzes, tests, or project evaluations. Provide constructive feedback to help participants identify areas for improvement and reinforce their understanding of the material. Encourage self-assessment and reflection to promote continuous learning.
- **Collaborative Learning:** Foster a collaborative learning environment where participants can learn from each other's experiences and expertise. Encourage teamwork, peer mentoring, and knowledge sharing among participants to enhance learning outcomes.
- **Resources and Support:** Provide participants with access to resources such as textbooks, online tutorials, and technical documentation to supplement their learning. Offer ongoing support and assistance to address any challenges or questions that arise during the training program.
- **Evaluation and Reflection:** Evaluate the effectiveness of the training program through participant feedback surveys, assessments, and performance metrics. Reflect on the strengths and weaknesses of the training methodology and make adjustments as needed for future iterations.

By following this methodology, you can create a structured and engaging training program for teaching students National Instruments tools in a circle training setting.

The integration of circle training in teaching National Instruments offers several advantages over traditional lecture-based approaches. It promotes active learning, fosters collaboration, and develops critical thinking skills essential for success in engineering and scientific disciplines. However, challenges such as group dynamics and time constraints may arise and require careful management. Additionally, further research is needed to assess the long-term effectiveness of circle training in preparing students for National Instruments related careers.

### **Conclusions and Suggestions:**

In conclusion, circle training methodology presents a valuable approach to teaching National Instruments, enhancing student engagement, comprehension, and skills development. Educators should incorporate collaborative learning strategies into their pedagogical practices to optimize student learning outcomes. Future research should focus on exploring variations of circle training and evaluating its effectiveness across different educational settings and student populations.

Incorporating circle training methodology into teaching National Instruments can greatly benefit students, preparing them for success in their academic and



professional pursuits. By fostering active learning and collaboration, educators can empower students to become proficient users of National Instruments tools and contribute effectively to their respective fields.

### References.

1. F.Mashrabboyeva. “Cholg‘u ijrochiligini o‘rganishda an‘anaviy va zamonaviy metodlar”, Journal. “Cholg‘u ijrochiligida musiqiy ta‘lim uzviyligini ta‘minlash”. 2022 yil
2. S.A.Mahmudova “Musiqiy madaniyatni shakllantirishda pedagogik tizimning ilmiy-nazariy asoslari” O.quv-uslubiy qo‘llanma. Farg‘ona 2023 yil.
3. D.T.Nomozova “Musiqqa o‘qitish texnologiyalari va loyihalash” T.2019.
4. X.Madrimov. Musiqqa o‘qitish texnologiyalari va loyihalash.T.2020
5. Akhmedov, B. (2023). THE FIRST FORMATION PROCESSES OF UZBEK VOCAL PERFORMANCE. *Педагогика и психология в современном мире: теоретические и практические исследования*, 2(8), 126-128. Maqom asoslari. T., 1992.
6. Fitrat A. O‘zbek klassik musiqasi va uning tarixi. T., 1993.
7. Akhmedov B. METHODS OF AESTHETIC EDUCATION IN DEVELOPING ARTISTIC TASTE AMONG STUDENTS //Innovative research in modern education. – 2023. – T. 1. – №. 3. – C. 15-17.
8. Sayfiddinovich, A. B. (2023). AESTHETIC EDUCATION TO STUDENTS IN MUSIC CLASSES OF GENERAL SECONDARY SCHOOLS. *Horizon: Journal of Humanity and Artificial Intelligence*, 2(4), 211-213.
9. Sayfiddinovich, A. B. (2023). Use of New Interactive Methods in Learning Songs in Secondary Schools. *CENTRAL ASIAN JOURNAL OF ARTS AND DESIGN*, 4(1), 10-14.