SIMODONT Dental trainer – Moogs
A new era in Dental education!
A Nissin Brand.

The Simodont virtual reality based teaching system provides key benefits to students and teachers alike.

It employs unique haptics technology, which provides realistic sense of touch to enable students to learn better, faster and more efficiently while giving faculty more effective teaching tools. Dental schools worldwide are discovering that the virtual reality system is an effective solution ready for integration with their teaching curriculum. Currently, for example, teaching tools do not facilitate active monitoring of student’s performance and their evaluation is based primarily on the result of student’s work!

By providing a simulated environment for practicing procedures, moogs dental trainer delivers a faster, more efficient transition of students from a pre-clinical to a clinical environment. Efficiency and productivity are the major benefits. In addition, it helps advance student’s skills via a wide variety of patient cases and tooth pathologies and it improves students’ engagement while giving teachers a more productive way of monitoring students’ performance as well an important assessment tool.
Students work on the Simodont and:

- Practice in their own time
- Login using manual login, swipe ID card or RFID card
- Select cases from planned courses
- Choose their own positioning: left or right handed
- Learn about the virtual patient
- Write a treatment plan and make treatment plan drawings
- Select the required instruments for the planned treatment
- Easily switch between different virtual instruments for the preparation of the tooth
- Can actually feel the difference between the different tissues in the tooth.
- Save 3D snapshots at different stages of the preparation
- Repeat exercises from a certain moment in the preparation using reloading of snapshots
- Inspect and review their preparation using virtual inspection tools not available in real practice
- Assess their own work using self-assessment rubrics
- Compare their preparation against self-made the treatment plan drawings
- Review the teachers’ feedback and grading on the Simodont

Teachers can use the Simodont for:

- User management: uploading and maintaining users, creating groups
- Planning of courses using the provided preset cases and customized cases
- Building customized case scenarios based on the provided model library containing over 60 tooth and manual dexterity models
- Importing intra oral scan data (STL) to build patient specific exercises
- Composing customized instrument sets from instrument library containing over 70 instruments
- Incorporate the schools own assessment rubrics
- Monitoring students and discuss cases in class using the remote viewer
- Reviewing student work in the evaluation environment
- Creating reports and exporting data

Simodont Supported procedures:

**Manual Dexterity**

Over 40 preset exercises from basic to advanced level, direct and indirect vision with automatic scoring in various fields like cariology, crown, and endodontic exercises.
Operative

Over 10 preset Class I, Class II and Class V cases with permanent and primary dentition models. Cases based on scanned real teeth, pictures and X-rays of the teeth are included in the cases with optional virtual patients. The ability to use various caries excavating burs, hand excavators and caries sensible probe.

Crown

It measures the reduction using the gauges and the tooth’s original outline and the wall angles using virtual measurement tools like grids and gauges. It enables users to test the occlusal reduction using the antagonist. It uses the tooth axis as a guide for the preparation of the tooth; moreover, users can inspect damage of the adjacent teeth.

Endodontic Access Cavity

Users can feel the drop in the pulp chamber and inspect the tooth in semi-transparent mode and inspect the radiograph of the tooth during work.

Patient Specific Workflow

Simodont enables users to create their own models and practice real clinical cases on it. It is compatible with many intra-oral scanners using the STL format.

Overall, the students will find the trainer, Easy to use, they will save valuable time in preclinical lab training and they will have a more engaging learning experience with appropriate faculty support and will save money through fewer plastic teeth and less instrument wear!

The future of dentistry and dental education has become more promising due to technology and artificial intelligence; we all – dental students – are looking forward to more inventions, revolutions and brilliant devices!
Information has been taken from: https://www.simodontdentaltrainer.com

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