



## Customer Comments, Outcomes, and Studies

August 2019



***“Training to become a commercial spray painting technician costs time, money, and requires the use of special equipment—all of which is fundamental to learning the trade, but VR can replicate some of this while providing important insight you wouldn’t otherwise get.”***

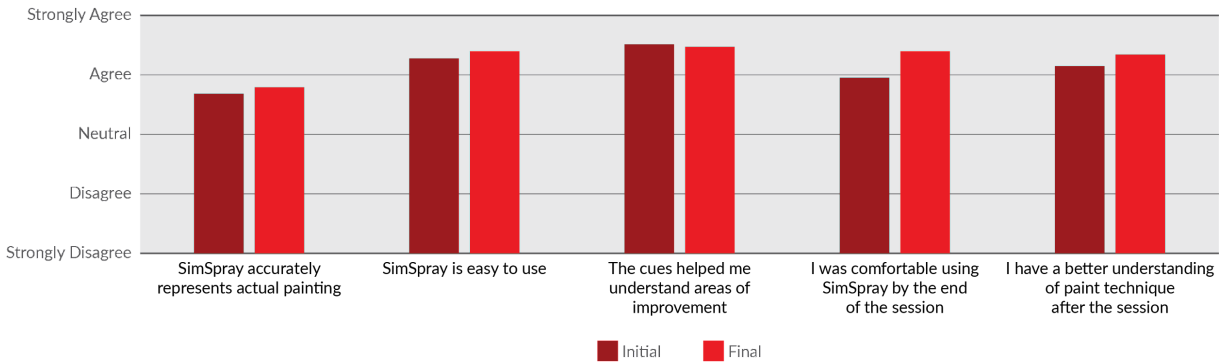
*[Scott Hayden, Road to VR](#)*



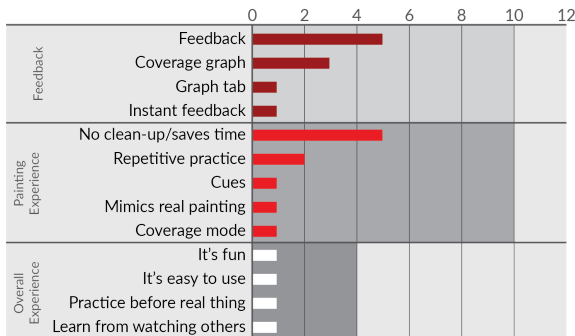
## Trial Usage Outcomes

Reported by a Top Ten Auto Manufacturer - 2/15/2017

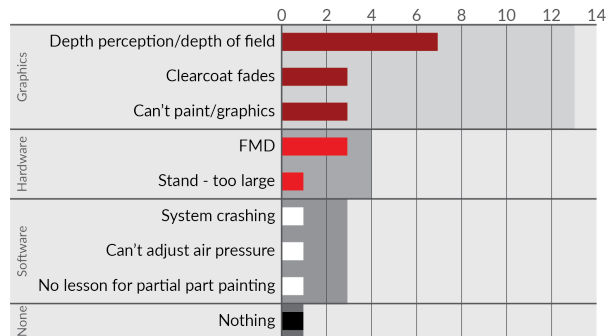
**Summary:** Study consisted of 19 participants involved in manual paint processes, with varied experience (beginner to expert). Participants spent 6-8 hours across 3-4 2-hour sessions with SimSpray. Sessions included an expert painter/instructor per 1-4 participants.



### What did you like most about SimSpray?



### What could be improved with SimSpray?



**VRSim Note:** Feedback is based on an earlier version of SimSpray. The current generation improved in identified areas.

### Study Takeaways:

- **Quick, out of the box implementation**
- **A valuable tool to use for training paint associates** for manual painting technique practice
  - Allows the student to practice basic technique to promote more advanced topics while in OJT/live training
  - Increased practice 15x more than live painting
- **Engages students** in the learning process
  - Students can use the system themselves
  - Provides a 'safe, non-production' environment to learn/practice
- **Will be incorporated into a training program** consisting of classroom training and on-the-job/live training

## User Study

Stanly Community College - 2/14/2017

**Summary:** Students were tasked with reaching basic proficiency; defined as scoring 65 out of 100 on a chosen part (ie. Car Hood). The time and monetary costs were compared with those required to reach the same proficiency level on a similar part in traditional live spray training.

**Study Note:** Training to this level of proficiency was estimated to take 16 hours and incur material (paint: sealer, base coat, clear coat, color coat, and activator) and consumable (PPE, sandpaper, cleaners, gloves, shoe covers, thinner) costs (est. \$987).

*Students get very competitive to see who can get the highest score. They also point out mistakes that each other make during the spraying process. They take turns using the computer while one does the actual spraying. They like trying different parts to see who can do the best. [Billy Huneycutt](#), Program Head of Autobody Repair/Restoration at Stanly Community College*

Student	Time	Attempts	Score
A	35 min.	6	69
B	20 min.	3	73
C	45 min.	9	65
D	20 min.	3	82
E	20 min.	2	68

All students **met or significantly exceeded target proficiency**

Students completed a total of 23 projects in 2 hours 20 minutes (**6-7x faster than traditional training**)

**Saved \$987** in material costs

*Every time a painter suits up and paints something, they use about \$125 worth of equipment. It takes time for them to suit up that isn't used actually painting something. Hands-on painting releases volatile organic compounds. We also avoid spilling paint when we use the simulator. [Travis Morgan](#), Training Instructor at Shop 71, Puget Sound Naval Shipyard & Intermediate Maintenance Facility*

*It's so much more powerful than sitting in a classroom, learning from books or watching videos. [Ryan Wooley](#), Chief Technology Officer at Hawken School*

## User Study

Van Buren Intermediate School District - 10/27/2016

**Summary:** Cost-savings review for an Autobody Collision and Repair program that using SimSpray for paint practice and new technique training. The program operates two classes per year with 25-30 students per class.

*Honda's Technical Development Center gives students the same virtual reality experience as its associates in an effort to promote STEM related careers. [Team Honda Cares](#) at Honda Technical Development Center*

Paint & Materials	Operating Costs	Training Time
35% decrease in overall material costs	20% reduction in program operating costs	60% increase in practice time, per student

**Study Note:** SimSpray projects are used to establish and test students' basic skill proficiency before their participation in live training (e.g. Students are required to score a minimum of 85 out of 100 before participating in live spray training).

*After training on SimSpray it is a lot less stressful when it comes to live spray. [The students'] reason was they learned the skills to become successful using SimSpray. [Kerry Coggins](#), AutoBody at Van Buren Intermediate School District*

*This machine gives students a stepping stone to the reality. It's something you can practice with, and when you get to the real spray gun, panel, and paint, students will go back and retrieve that information from the training and put in practice on the real project." [Efrain Villarreal](#), Career and Technical Education Automotive Collision Teacher at San Benito Consolidated Independent School District*

*You push a button, and you have a clean part to start with. It gives you a lot of repetitions in a pretty short period of time, which you can't get in a production environment today. [Tod Gray](#), New Model Paint Project Lead at East Liberty Auto Plant*

## Customer Comments

The simulator tracks exactly how students hold and move the sprayer. The software provides real-time feedback to the instructor as well. We can pause what they are doing and show them where they've moved the sprayer too quickly or too slowly. We can show them where they overlapped their paint layers too much or too little. [Travis McGregor](#), Training Instructor at Shop 71, Puget Sound Naval Shipyard & Intermediate Maintenance Facility

Most of our students don't have any experience painting. We get people straight out of high school, from (local grocery stores), or coming from a different trade. Using the simulator is the best way to help them build their skills. [Travis McGregor](#), Training Instructor at Shop 71, Puget Sound Naval Shipyard & Intermediate Maintenance Facility

Before VR technology, we had to have actual physical assets. We would have to have students actually operate that equipment. Now, it allows a student to learn those skills, but in a virtual way. [Scot McLemore](#), Manager of Talent Acquisition and Deployment at Honda North America

I took my students to Atlanta, GA to the PPG Paint Training Center for training and certification. The instructors from PPG and other certified, experienced painters attending the center all commented on how exact my students' technique was... including gun angle, speed, distance, and overlap... Everyone asked me how they got to be so good. My answer is SimSpray forces them to do that. [Billy Huneycutt](#), Program Head of Autobody Repair/Restoration at Stanly Community College

We use [SimSpray] as a good training device when we demonstrate how to mix up paint and how to know what to look for when applying the coatings. The VR model covers all the different aspects of spray painting: angles, spray gun speeds, and other related conventional techniques. [David Burtle](#), Director of Training/Field Representative at the International Union of Painters and Allied Trades (IUPAT)

