Mississippi Valley Workforce Development Board

Work Experience Virtual Reality Plan

Purpose

Transfr Virtual Reality (VR) is an innovative work-based learning addition to maximize results of our youth work experiences, leading to greater results and job ready candidates for long-term stability and development of career pathways.

What is VR Training?

VR training simulates the type of training that takes place in a physical training facility. VR simulations teach trainees in the same way that experts teach novices — through trial and error — with the guidance of a digital coach. VR safely replicates an on-the-job environment anywhere — in rural areas, at home, or in the classroom.

VR hands-on simulation-based training helps youth develop the skills they need to secure well-paying jobs in high-demand fields. Construction, Manufacturing, Healthcare, Transportation Distribution & logistics, Automotive & Aviation and Hospitality & Tourism are the current industries offered through VR headsets. The skills gap in the manufacturing sector exists because of an outdated view or lack of awareness of the opportunities in the automotive and construction industries and other skilled trades. Over half of the manufacturing workforce is set to retire by 2030, creating millions of openings for jobs that do not require a 4-year degree.

Subject matter experts ensure the immersive training simulations are designed to be authentic, efficient, engaging, and effective, and aligned with industry standards. Trainees master skills at their own pace and receive direct one-to-one feedback from the digital coach.

Demand for talent is growing in industries like manufacturing, transportation, construction and skilled trades – professions that can often lead to long-term economic and career stability. However, students often lack awareness of the education or training options they need to get started.

The full Catalog of Career Exploration Options and Virtual Training Facility Courses can be found at https://docsend.com/view/3tchewxytffvqayq

VR Coaching and Supervision

A digital coach guides trainees through modules where they interact with realistic tools and environments and receive live feedback based on their actions. The one-to-one relationship of digital coach to trainee provides a level of consistency and personal attention that is not possible in a traditional teacher-student environment, and also gives trainees the freedom to fail without being subject to peer pressure. Trainees develop the confidence they need to:

- complete the training within the simulation, and then
- transfer their new skills to a real-world environment

VR Performance Dashboard
The VR Dashboard provides instructors with granular, customizable views into learner progress and overall class performance, allowing them to tell who needs more help and what challenges may be common across all learners.

Within the VR experience the software continuously evaluates trainee engagement and quantifies their behaviors as they progress towards skill mastery. This intelligent system is driven by machine learning algorithms that capture behavioral trends in the trainee's performance.

The Virtual Training Facility platform gives instructors insights into class performance and where students and trainees exceed or face challenges. The dashboard's customized scoring fosters mastery through repetition of actions and skills. It assigns weights to different steps depending on their individual importance or difficulty. Instructors can quickly review student performance (score, status, time spent, number of attempts, etc.) and make changes as required.

The platform combines a learner's in-game play data with real-world business data, providing a ground truth in understanding how users' performance in the training system is related to real-world outcomes. It then provides trainees with personalized feedback that helps them become more proficient.

Benefits of Incorporation of VR Training:
- Increased confidence for youth participants
- Youth learn skills to enter the workforce more quickly and set them up for long term success in unsubsidized employment
- Reduces training time and material costs compared to traditional methods.
- Immersive simulations are also shown to have higher retention when compared to video tutorials, slide presentations, or other presentation styles.
- Adding VR to existing programs helps increase local employment levels and lower cost and risk for employers.
- Build training programs that scale and quickly deliver ROI.
- Reduce onboarding training costs for employers
- Close the skills gap for roles businesses are trying to fill
- Create alternative pathways to career success for Youth job seekers with barriers
- More attractive to employers than traditional WEPs

Local Incorporation of VR Technology into WEP Programming

- VR can be used during a pre-WEP activity to provide job readiness training to prepare youth for an experiential learning activity.
- VR simulation will provide the youth participant with opportunities for career exploration and skill development.
- VR simulation can be used as part of the classroom training or orientation to introduce new skills to Youth during their WEP experience.
- VR will be incorporated into an employers onboarding process when applicable or as the first number of hours of a WEP or group session while the youth is being paid

PY22 Goals
- Place 60 youth into work experience opportunities
- Build VR training into WEP training plans
- Focus on placing WEP in-demand industries in MVWA in Construction, Manufacturing, Healthcare, Transportation Distribution & logistics, Hospitality & Tourism. (See Appendix A)
- Increase businesses willingness to participate in WEP placements.
- Measure the Youth's mastery of skills through the VR dashboard from pre-test to post test.
- Measure the participants satisfaction with the VR training component of their WEP.
- Develop model and standards that can be replicated in other Youth WEP programs.

Monthly Youth Reports Will Include:
- Data on number of Youth participated
- Number of Youth interested in each career
- Survey results
- Number of hours Youth participated
- And other instructor dashboard metrics

Transfr Training and Implementation Support
Transfr provides Training and Implementation Consulting and Technical Support through their Career Success Manager and Customer Support Specialist

Implementation Consulting
- On a quarterly basis the Career Success Manager will meet with the board and Project Director staff to review data retrieved from the dashboard.
- Monthly the Career Success Manager will meet with local Operations Managers who provide strategic guidance and direct oversight of the program. These Individuals own the overall success of the Transfr program and lead the strategic use, adoption, and best practices of Transfr within the MVWA.
- Local Instructors will be the subject matter expert and individuals responsible for instruction and / or oversight of training with participants. There will be two instructors in each center who will be Transfr certified after completion of the Training Workshop.

Technical Support Provided for Instructors by Transfr
- Initial Training Workshops
- Train-the-Trainer Workshop
- Supplemental Self-Paced Training Resources

VR as an Evidence Based Approach
Alabama Lockheed Martin Student Pilot Program
- Nearly half of the trainees scored at or above 90% on the real-world transfer test with no prior human coaching or hands-on experience with the tools.
- Less than 25% of Learning and Design professionals would recommend their own corporate learning pro- gram; traditional corporate training is often seen as ineffective and boring.
- The VR pilot revealed that 80% of trainees reported TRANSFR Inc's VR training was engaging.
- 75% of trainees self-reported that they preferred TRANSFR Inc's VR training to traditional training.
- The average increase in proficiency scores from pretest to posttest was 8.6%, increasing from 82.6% on the pretest to 91.2% on the posttest.
- Training in VR was found to be effective at improving content knowledge at half the cost to traditional learning approaches with a trainer.
- 75% of trainees said they felt like the TRANSFR training they experienced prepared them for what they will face on the job.

Jumpstart Alabama Overview
JumpstartAL is a virtual reality-based workforce development initiative created through a public-private partnership with the state's most influential organizations to develop the next generation of skilled labor by using innovative technology solutions. JumpstartAL is working with TRANSFR to make hands-on training simulations available to schools in order to successfully meet the state's current and future need for skilled labor.
- The program offers scalable work-based training simulations.
- Pre-apprenticeship training in virtual reality that enables a job seeker to practice the hands-on skills required for the job.
- Provide a virtual training center that makes training for in-demand skills available on demand.

Altec Case Study
Transfr is building a classroom-to-career pipeline that reduces burdens related to cost, scalability, and risk. The hands-on, simulation-based modules provide people with the marketable skills they need to secure careers that offer livable wages, upward mobility, and sustained success.
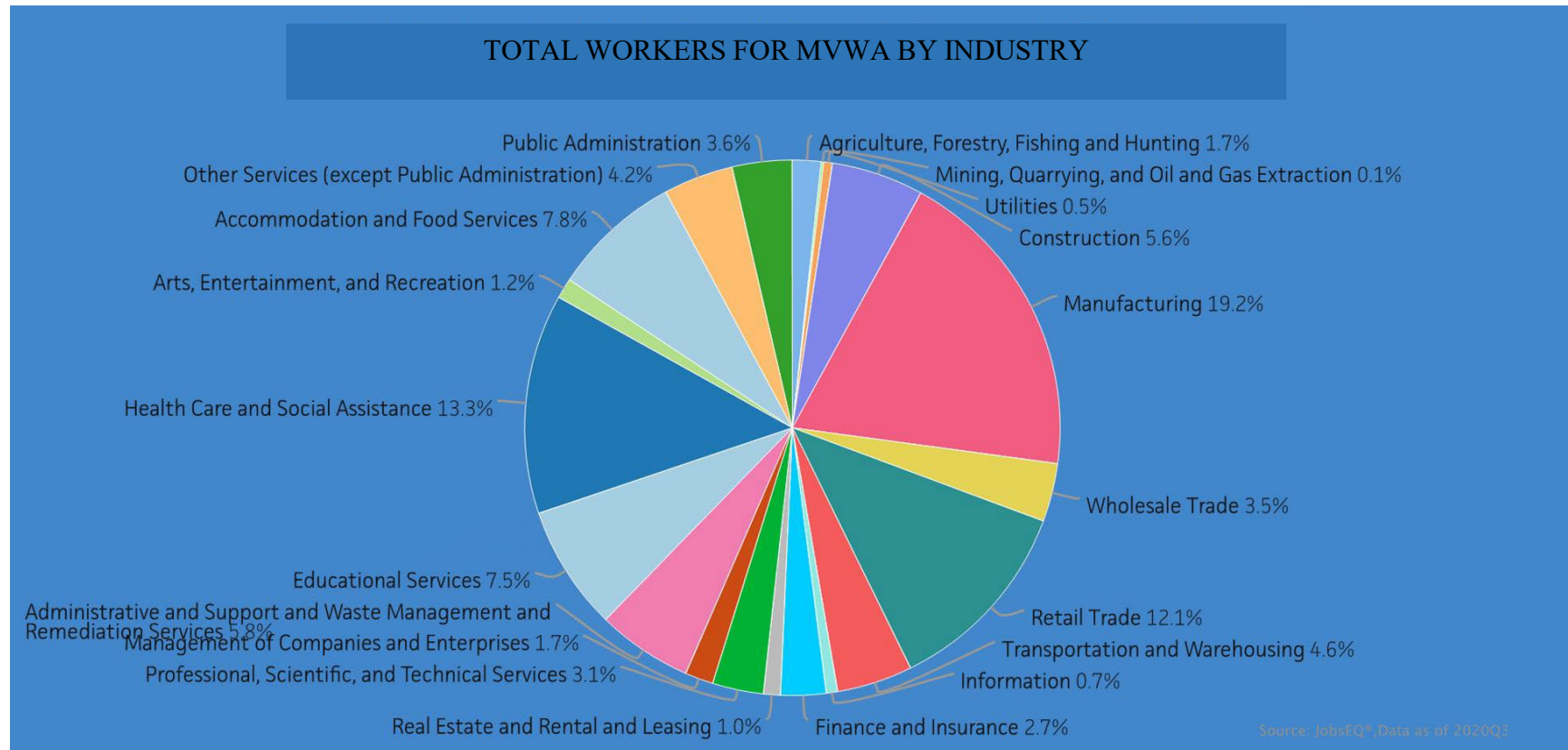- In 2020, 16 Shelton State cohorts were completed, preparing 79 students for their next career move.

- 1,244 total TRANSFR training simulations were completed with an average mastery score of 92% throughout 16 cohorts.

Appendix A

Local Area Labor Market Information

According to JobsEQ the largest sector in the MVWA is Manufacturing, employing 37,200 workers. The next-largest sectors in the Local Area are Health Care and Social Assistance (25,763 workers) and Retail Trade (23,420).

TOTAL WORKERS FOR MVWA BY INDUSTRY

- Public Administration 3.6%
- Other Services (except Public Administration) 4.2%
- Accommodation and Food Services 7.8%
- Arts, Entertainment, and Recreation 1.2%
- Health Care and Social Assistance 13.3%
- Educational Services 7.5%
- Administrative and Support and Waste Management and Remediation Services 5.8%
- Management of Companies and Enterprises 1.7%
- Professional, Scientific, and Technical Services 3.1%
- Real Estate and Rental and Leasing 1.0%
- Agriculture, Forestry, Fishing and Hunting 1.7%
- Mining, Quarrying, and Oil and Gas Extraction 0.1%
- Utilities 0.5%
- Construction 5.6%
- Manufacturing 19.2%
- Wholesale Trade 3.5%
- Retail Trade 12.1%
- Transportation and Warehousing 4.6%
- Information 0.7%
- Finance and Insurance 2.7%

Source: JobsEQ®,Data as of 2020Q3

Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q2 with preliminary estimates updated to 2020Q3.

The fastest growing sector in the Local Area is expected to be Health Care and Social Assistance with a +0.6% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Health Care and Social Assistance (+157 jobs), Professional, Scientific, and Technical Services (+12), and Accommodation and Food Services (+10). Despite Manufacturing jobs contracting during this period the annual demand is still the largest in MVWA with a total annual demand of 3,453 jobs.

NAICS	Industry	CURRENT			5-YEAR HISTORY		1-YEAR FORECAST				
		Empl	Avg Ann Wages	LQ	Empl Change	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
31	Manufacturing	37,200	$61,980	2.33	-1,178	-0.6%	3,453	1,423	2,436	-406	-1.1%
62	Health Care and Social Assistance	25,763	$46,051	0.90	-1,283	-1.0%	2,586	1,194	1,235	157	0.6%
44	Retail Trade	23,420	$29,166	1.18	-1,705	-1.4%	2,867	1,376	1,738	-247	-1.1%
72	Accommodation and Food Services	15,184	$16,533	0.97	-1,326	-1.7%	2,463	1,085	1,367	10	0.1%
23	Construction	10,783	$55,987	0.95	-1,964	-3.3%	1,021	379	676	-34	-0.3%
48	Transportation and Warehousing	8,834	$50,086	0.96	-186	-0.4%	904	399	540	-35	-0.4%

Source: JobsEQ®
Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q2 with preliminary estimates updated to 2020Q3. Forecast employment growth uses national projections adapted for regional