

2018

Creative Strategies for Career Connected Learning:
Youth Voice in the Media Classroom



OFFICE OF ARTS & CULTURE
SEATTLE



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Creative Occupations in Seattle

According to the most recent report from City of Seattle's Office of Economic Development (2018), most creative jobs are in two job families: arts and computers. Additionally, their study based on proprietary Emsi economic modeling and labor market data found that: At 35,161 jobs in 2017, the arts job family accounts for more than half (52.2%) of Seattle's 67,350 creative jobs.

The largest occupations in the family include Photographers (5,664 jobs), Graphic Designers (3,688), Writers and Authors (3,683), Musicians and Singers (3,265), and Producers and Directors (1,577).

Our expanding recognition of the increasing interconnectedness of technology and creativity should lead us to build on our strengths in computer-related creative occupations. These occupations, with their high wages (more on that in subsequent sections) and steady growth, may be avenues for job seekers who wish to use

their creative skills while enjoying the high earnings that technology jobs offer.

Arts and design occupations bring tremendous value to the Seattle area, from music, sculptures and murals that lift our spirits and enrich our shared experience of living in Seattle, to the graphic designers and photographers who advertise our businesses. And, if we value the contributions of these occupations to our community, we need to ensure that people in those occupations can live and work here.

What do people in these jobs do?

Scattered through this report are career profiles that are based upon interviews conducted in Summer 2018. We conducted more interviews than could be included in this report, but all insights went into this report and analysis.

Career Profiles

Graphic Design: Stacy Nguyen	13
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Executive Summary & Recommendations

The following recommendations emerged from survey responses which included direct quotes from youth, collected anonymously, about what youth enjoy in their media arts Career and Technical Education (CTE) courses and their career aspirations as they relate to the arts. They are supplemented by insights generated by in depth interviews conducted with creatives in media arts occupations in Seattle.

Media arts foster a well-rounded education: Many students see the arts as an area they want to foster as a part of their whole selves and pursue media art CTE courses as part of a means of finding other more lucrative paid livelihoods (such as law, engineering, business, science, and medicine). Access to the arts is an equity issue that intersects with neighborhood, institutional racism in education, and class/income disparities. We must close the opportunity gap as it pertains to arts courses, and media arts as a strategy for creative youth and workforce development.

The arts and 21st century skills: Though students are in the media arts CTE courses as a chosen elective, most students can articulate a direct connection between what they are learning and 21st century skills, which include creativity, critical thinking, communication, collaboration, a growth mindset, and perseverance. This report affirms that the media arts skills centers are enhancing youth cultivation of 21st century skills through the arts, even when they state overall that their career paths are in non-arts fields.

Media arts skills to build opportunities for self-expression: Most students, if they identified a career aspiration beyond high school, identified stronger interests in the health and medical sciences, engineering/STEM fields, business, and other non-arts pathways. This pattern is even more pronounced given the economic push by family members to pursue these fields in immigrant and refugee communities and implicit bias of steerage away from arts and cultures fields.¹ Nevertheless, these same student respondents recognize the benefits of having media arts skills, which gives them a voice and allows them room for creative self-expression and identity work. Making this awareness an explicit part of the course design could be more inclusive of the career aspirations of youth pursuing non-arts career pathways.

1. Julia Lee, "When People of Color Are Discouraged From Going Into the Arts," The Atlantic, 28 Feb 2016. Available online at <https://www.theatlantic.com/education/archive/2016/02/oscars-so-white-academia-stereotypes/471291/>

Create a more explicit pathway for career connected learning in media arts: Industry specific knowledge in the media arts sectors should be integrated as part of media arts course curriculum with the goal of exposing students to more career connected learning opportunities and to enhance business/administrative, technological, and operational aspects of the arts and cultures sectors. Employers and post-secondary feeder schools all want talent and a creative workforce that is also inclusive of diversity; creation of that explicit pathway through CTE courses could help uplift POC artists and the arts talent pipeline, where historically there hasn't been access.

Allow for semi-structured assignments and flexibility for creativity in media arts course assignments to boost intrinsic motivations: Most students indicated they liked assignments that allowed room for creativity and interpretation, as opposed to having too many rules and guidelines in production. That intrinsic motivation can be drawn out through culturally responsive teaching and learning as well as use of contemporary arts and cultures themes and race and social justice topics.

Make more space for diversity, inclusion, and culturally-responsive learning in the media arts: Demographic diversity and the power of images over text to reach youth of color and immigrant and refugee students who are enrolled should inform course design. A large number of survey respondents live in family households that speak languages other than English. Those languages are primarily Spanish, East African languages (Somali, Amharic, Tigrinya, and Oromo), Vietnamese, and Chinese. Hence, there is opportunity to use arts and cultures-based learning as a means of expression that makes room for immigrants, refugees, and their children to articulate both their local and globalized sense of belonging and identity. If it is not already, cultural difference should be seen and messaged by teachers as an asset, and schools need to engage in more culturally-responsive pedagogy and inclusion work for the benefit of all students. It also has been demonstrated that student exposure to instructors of color is beneficial for all students.²

2. Hua-Yu Sebastian Chergn and Peter F. Halpin (2016), "The Importance of Minority Teachers: Student Perceptions of Minority Versus White Teachers." *Educational Researcher*, 45(7): 2016.

Part One - Introduction

The Creative Advantage¹ is a citywide initiative to ensure equitable access to arts education for each and every student in Seattle Public Schools (SPS). In 2016, a grant from Paul G. Allen Family Foundation in the amount of \$395,000² was awarded to the initiative supporting new SPS media arts courses supplemented by \$100,000 in year 1 from the City of Seattle, and \$50,000 ongoingly. Statewide, new media arts course standards are being developed and adopted statewide in Washington, a recognition of the importance of these skills and tools. The ARTS office asked their Mellon/ACLS Public Fellow to do an assessment of the media arts Career and Technical Education (CTE) courses as they relate to skills development and career connected learning. The Creative Advantage team determined that a pilot and survey at five comprehensive high schools would provide a window into understanding student perception around the courses, career connectedness, and future directions of the program. The data, based upon a survey to young people enrolled in media arts CTE courses and profiles of creative media arts occupations featured in this report re-enforce the importance of creative strategies in career connected learning. At the forefront of our recommendations are that media arts skills centers are a way for high school youth to build resilience, collaborations, enhance their career horizons, forge community connections, and to achieve non-arts career goals with a more well-rounded education.

Within the umbrella of CTE courses, Seattle Skills Center provides a 2-year sequence of advanced learning with hands-on application of both industry and college preparation programs. Creative industries are growth industries in Seattle, such as computer gaming, music production, film production, graphic design, and fashion. Select media arts courses at SPS include graphic arts/graphic design, yearbook/publishing, video production, photo foundations/advanced photography, and animation/gaming. In focus groups with SPS students conducted in 2012, students said they wanted more opportunities to connect the arts and careers, specifically in these growth industries.³

SPS is considering proposals to transform and deepen pedagogical opportunities

1. The Creative Advantage Progress Report, https://www.creativeadvantageseattle.org/wp-content/uploads/2018/05/2016-17_ProgressReport.pdf. "The Creative Advantage is a city-wide initiative to establish equitable access to arts education for each and every student in Seattle Public Schools. The Creative Advantage is made possible through a public-private partnership with Seattle Public Schools, the City of Seattle Office of Arts & Culture, the Seattle Foundation, and community arts organizations."

2. Although most of the funds are earmarked for the Seattle Public Schools, some money supports research and other items via ARTS.

3. School Board Briefing/Proposed Action Report: "[Accepting The Seattle Foundation/Vulcan Foundation grant to fund Creative Advantage/CTE Media Arts Skills Center Programs and Creative Advantage Regional Arts Showcase.](#)" 26 Oct 2016.

in high school by implementing RCW 28A.230.090, a 24-credit graduation requirement as an opportunity to increase successful outcomes for our high school students. This has implications for equity in course retrieval as well as a deepening of media arts coursework and pedagogy, which this report highlights.

The stories and descriptive data presented in this report address both the youth experiences in the media arts courses and the career profiles and articulates:

1. How media arts courses help cultivate 21st century skills and creative habits/social skills;
2. What aspects of curriculum and pedagogy were youth most receptive to;
3. What opportunities exist for boosting career connected learning in the media arts.

The national framework known as creative youth development takes a holistic, asset-based and artistically rigorous approach to helping young people thrive and actualize their whole selves.⁴ Informed by these practices and its vision, this report takes as a starting point that arts and culture matters in the lives of youth for developing other skills and traits. Taking this a step further, according to Dr. Lauren Berliner, UW Bothell, “digital media and storytelling allows for different modes of self-representation than traditional literacies. There is more room (or at least appears to be) for non-linear narratives and abstract thinking, which opens up more space for what Diana Taylor would refer to as ‘the repertoire’ as opposed to Western, archival, text-based systems of knowing and reproducing knowledge.”

A Framework for CTE Media Arts Skills Centers

The following theoretical frameworks informed our analytic process, which had to do with the intersection between 21st century skills (defined below), social emotional learning, culturally responsive teaching and learning, media arts skills, and technical skills. These frameworks are the lens through which pedagogy and assessment can occur, to move beyond a “one size fits all” approach to the media arts CTE coursework.

4. Creative Youth Development Blueprint: <http://creativyouthdevelopment.org/national-action-blueprint/what-is-cyd-and-its-impact/>. Accessed July 5, 2018.

21st Century Skills

According to the Seattle K-12 Arts Plan, “students will engage in 21st century arts learning in arts classes taught by classroom teachers and teaching artists, and through learning experiences presented by community arts organizations in and outside of the school day.”⁵ Among the skills obtained from an arts education are artistic skills and knowledge taught as a means of communication and expression of culture and 21st century skills of habit of mind such as creativity and critical thinking, communication and collaboration, and perseverance and growth mind-set.

21st century skills refer to those skills needed by students in order to thrive in school, career, and life. These skills are a core component of high quality arts teaching and learning. The six intertwined 21st century skills to be cultivated through Seattle Public School arts learning are:

- **Creative and Critical Thinking:** To create new and useful ideas, innovations, and products; and to elaborate, refine, analyze, and evaluate one’s own and others’ ideas.
- **Communication:** To articulate thoughts and emotions effectively using oral, written, and non-verbal skills; to listen effectively; to inform, instruct, motivate, and persuade; to negotiate; and to give and receive feedback.
- **Collaboration:** To work effectively and respectfully with diverse teams, which involves flexibility, sharing, responsibility, and being open and responsive to new and diverse perspectives.
- **Perseverance and Growth Mind-set:** A belief that intelligence and ability can be increased with effort; a belief in one’s own capabilities and capacity to learn. A growth mind-set is foundational to perseverance: persisting in a task through to completion.

Habits of Mind

[Acosta and Kallick](#) refer to 16 habits of mind for effective problem solving. There is significant overlap between these habits and 21st century skills.

1. Persisting
2. Thinking and communicating with clarity and precision
3. Managing impulsivity
4. Gathering data through all senses

5. “Seattle K-12 Arts Plan,” 2013. Seattle Public Schools and Seattle Office of Arts & Cultural Affairs.

5. Listening with understanding and empathy
6. Creating, imagining, innovating
7. Thinking flexibly
8. Responding with wonderment and awe
9. Thinking about thinking (metacognition)
10. Taking responsible risks
11. Striving for accuracy
12. Finding humor
13. Questioning and posing problems
14. Thinking interdependently
15. Applying past knowledge to new situations
16. Remaining open to continuous learning

The overlap between 21st century skills and 16 habits of mind are in creativity, critical thinking, communication, perseverance/persisting, however, the distinctions are not as clear cut. In this paper, we will mainly be referring to 21st century skills, in alignment with Seattle Public Schools.

Social Emotional Learning

Teachers also point to social and emotional learning as the process through which individuals learn and apply a set of social, emotional, behavioral, and character skills required to succeed in schooling, the workplace, relationships, and citizenship. The framework used by Jones, Brush, Bailey et al (Mar 2017) “divides core SEL skills into three domains: cognitive regulation (including attention control, inhibitory control, working memory/planning, cognitive flexibility), emotional processes (including emotion knowledge/expression, emotion/behavior regulation, empathy/perspective-taking), and social/interpersonal skills (including understanding social cues, conflict resolution, prosocial behavior). These three domains and their associated skills are related to both short- and long-term outcomes related to academic achievement (e.g., grades, standardized tests), behavioral adjustment (e.g., getting along with others, solving conflicts, and exhibiting less aggression/fewer conduct problems), and emotional health and wellbeing (e.g., lower levels of depression and social isolation).”⁶ We want to recognize the importance of intentionally working towards social and emotional learning

6. Stephanie Jones, Katharine Brush, Rebecca Bailey, Gretchen Brion-Meisels, Joseph McIntyre, Jennifer Kahn, Bryan Nelson, and Laura Stickle, “Navigating SEL from the Inside Out: Looking Inside and Across 25 Leading SEL Programs: A Practice Resource for Schools and OST Providers.” Mar 2017. <https://www.wallacefoundation.org/knowledge-center/Documents/Navigating-Social-and-Emotional-Learning-from-the-Inside-Out.pdf>. There is also a list of key resources and knowledge bank at the Youth Development Executives of King County webpage: <https://ydekc.org/news/selsym2018/>.

strategies in media arts courses, as many communities who could benefit from trauma informed teaching may also benefit from individual and collective storytelling which can foster a sense of belonging and recognition.

Culturally Relevant and Responsive Teaching

Culturally relevant and responsive teaching (Trumbull, 2005; Ladson-Billings, 2001; Gay, 2000; Weinstein, Curran, & Tomlinson-Clarke, 2003; Kirkland, 2003) is validating, comprehensive, multidimensional, empowering, transformative, and emancipatory. Culture has been defined as “The system of values, beliefs, and ways of knowing that guide communities of people in their daily lives.” Effective teacher preparation addresses the need for teachers to acknowledge students’ diversity and incorporate their pluralistic backgrounds and experiences into the learning experiences and classroom environment. In culturally relevant pedagogy, culturally responsive teaching (and other similar terms) teachers develop the knowledge, skills, and predispositions to teach children from diverse racial, ethnic, language, and social class backgrounds. Good multicultural teaching honors our diverse cultural and ethnic experiences, contributions and identities and teachers need to understand the experiences and perspectives [students] bring to educational settings and be responsive to the cultures of different groups in designing curriculum, learning activities, classroom climate, instructional materials and techniques, and assessment procedures. Culturally relevant pedagogy aims to ensure that educators acknowledge and honor the diverse viewpoints of their student population and refrain from promoting homogeneous perspectives as universal beliefs.

Teaching for Racial and Social Justice

How can we better integrate race and social justice, for the times that we and our students are living through? Watson, Hagopian, and Au, the editors of *Teaching for Black Lives* (2018) recommend that educators “provide a social justice, anti-racist curriculum that gives students the historical grounding, literacy skills, and space to explore [for instance] the emotional intensity of feelings around the murder of Black youth by police ... that is the slow, steady work of meaningful classroom conversation, purposeful group work, reading and writing about critical social and personal issues, shared writing, and more.” (21).

Design and Marketing/Web

Stacy Nguyen, freelance

Stacy Nguyen is a self-taught graphic designer and business owner who was raised in Lynnwood. As a kid she could be found coding neopets (a virtual pet community site), learning creative suites for design and, more recently, teaching herself stop-motion design.

Attaining an English and creative writing major in college gave Stacy the opportunity to work

TECHNICAL SKILLS & TOOLS

Adobe Creative Suite (Indesign, Photoshop, Illustrator) and business/client management software

in writing and journalism. It was through that world that she developed her love for design, working on projects such as newspaper layout, web layout, and web editing. After being laid off from her salaried position in 2015, Stacy was unsure of next steps. Knowing that she didn't want to return to a full-time position, she began freelancing part-time, contacting

GRAPHIC DESIGN

Did you know that graphic designers have growing employment demand in the Seattle MSA region in the occupational family of arts, design, entertainment, sports, and media? Between January 2015 and December 2017 there were over 12,000 unique job postings asking for graphic designers.

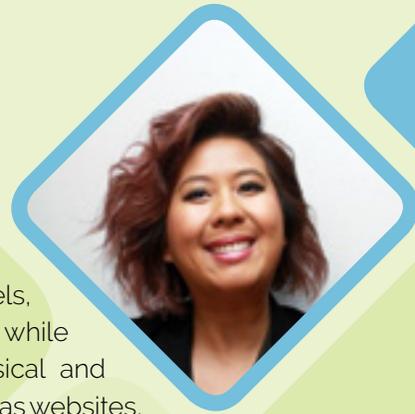
clients from previous work and developing her entrepreneurial skills. "There's a lot of great designers who miss the business component," Stacy explains. "I pay myself a salary. I have an accountant. I live way below my means. If you don't know it, you have to learn it."

Stacy has been a freelance designer with clients across the US for the past ten years. Day-to-day, Stacy's workload is 60% branding

and 40% production work. Branding is how a company looks, feels, and communicates while production is the physical and electronic product such as websites, reports, and collateral. Using Adobe Photoshop, Illustrator, and InDesign, Stacy has been able to have conversations with clients about how to create effective branding and production strategies. Her clients and partners have included the Northwest Asian Weekly, Volt Information Sciences, Rainier Valley Corps, and various musicians and venues for concert poster work.

When it came to the future of the design industry, Stacy had a lot of insight. "There is so much growth here. This is a skillset that will always be needed. The ability to communicate complex ideas and distill it into infographics and images," are important Stacy states. She explains further how designers are now expected more and more to know how to code, build websites from the ground up, and know all of the technical skills continuing to emphasize how you must also work to keep and maintain your critical thinking skills if you want to continue to grow in the field.

"I'm Vietnamese, my cultural identity factors into my work all the time whether it's for profit or corporate. Being female is also really important. I also filter stuff through a social justice lens, it's not perfect but representation factors a lot for me, [such as how and] who is included in imagery."



Media Art Skills

The media arts CTE courses, as a platform for learning social skills, media skills, and technical skills, are a repository for so many of the aforementioned values and processes. According to the Washington State Arts Learning Standards, “A student’s media arts-education experience may include, but is not limited to, photography, film, animation, broadcast technology (radio, T.V., and Internet), audio/video technology (T.V., radio, and audio projects, social media, and Internet projects), video game design, digital art and design, emerging technologies, visual communications, Advanced Placement Studio (AP) courses, and International Baccalaureate (IB) visual arts.”⁷ Media arts includes screen-based projects presented via film, television, radio, audio, video, the Internet, interactive and mobile technologies, video games, transmedia storytelling, and satellite as well as media-related printed books, catalogues, and journals. A report by PolicyLink (2017) recognizes that “technology and digital media create tremendous opportunity for diversity and inclusion of expression, ideas, and cultures and have unprecedented potential to give voice and power to communities fighting economic inequity, bias and discrimination, and cultural misrepresentation.” Citing UC Berkeley Professor Kris D. Gutiérrez, their report notes that “equity is not just about access. It involves a new social and pedagogical imagination about how youth and people from non-dominant communities can become designers of their own futures.”⁸ There is a case to be made for enhancing the access to media arts skills as a way for English language learners (ELL) to sharpen and reflect their critical thinking and communication skills in Seattle Public Schools because of the fluidity of non-text expression and opportunities to use imagery, sound, and alternate modes of expression. Media arts skills include editing and layout, website building, logo design, interviewing, and so on.

Technical Skills

Technical skills are the abilities and knowledge needed to perform specific tasks. Technical skills and tools that further a media arts skillset include the Adobe suite software, website coding and web design work, camera and lighting operat-

7. Washington State Learning Standards adopted in April 2017, “The Arts Learning Standards: Media Arts by Grade Level,” page iv. <http://www.k12.wa.us/Arts/Standards/2017/MediaArtsStandards.pdf>. National Endowment for the Arts, “Media Arts” definition is available at <https://www.arts.gov/artistic-fields/media-arts>. Media Arts Fact Sheet is at https://www.arts.gov/sites/default/files/Media_Arts_fact_sheet_nov2016.pdf. National Endowment for the Arts (NEA) defines media arts as all genres and forms that use electronic media, film and technology (analog and digital; old and new) as an artistic medium or a medium to broadcast arts appreciation and awareness of any discipline.

8. Creating Change through Arts, Culture, and Equitable Development: A Policy and Practice Primer by PolicyLink (2017) http://www.policylink.org/sites/default/files/report_arts_culture_equitable-development.pdf

Design and Photography

Sunny Martini, freelance

Sunny Martini is a Seattle designer, graphic designer, and photographer. Growing up in Florida provided Sunny the opportunity to study design and photography. Since moving to Seattle, she has created an impressive portfolio designing for clients such as KEXP, AEG, Showbox Presents, Bumbershoot, KOMO, and Neumos.

Compared to other music photographers, Sunny started late getting serious about music photography in college which she states proves

PHOTOGRAPHERS

There are approximately 5,664 working photographers in Seattle.

how anyone can start photography at any time if they put the work in. Her research and interests stemmed from seeing her favorite music photographer doing a live shoot and wondering how she could do that. "From there I researched how to be that photographer and it was a lot of hustling, research, messaging people, emailing people, maybe not getting the best responses. I struggled for a year trying to learn how you get into there and the most proper way to do it," she states.

During research and practice, she learned three important lessons:

Build Your Portfolio : Whether your portfolio is a website, a kept-up Instagram account (which is acceptable), or a physical book, having something that people can attach to your name is necessary. "I kind of lucked out because I only had an Instagram and the only photos on my Instagram were cellphone pics, so I got picked up from that."

Learn How to Properly Network: "Another lesson is being really kind and courteous about how

you approach people" Sunny emphasized. The most common question photographers get asked is "who do you shoot for?" This question shows that whoever is asking is only interested in sizing up the photographer for the outlet rather than getting to know her.

Figure Out Your Rate: Not knowing where to start when she was first getting paid from photography,

Sunny asked photographers over Instagram what they charged for certain sessions and used the average of her responses as her rate. She found that when she was kind and courteous, people were usually willing to respond to inquiries.

Sunny lives on Capitol Hill and has a full-time graphic design job. "I use my full time graphic design job so that I could sustain myself and so I didn't have to live paycheck to paycheck month to month. For a while, I used photo as the side hustle," Sunny explained.

She started off with one local blog to build a better portfolio and would intentionally introduce herself to people on the job. "I basically wanted to make more photography friends and didn't realize that I was also networking. I think your bond is stronger when you go in for it more as a friend because you trust them more and trust that they're not trying to take your source."

Learning video is becoming more and more necessary alongside being able to develop your own website to convey your brand. Personally, Sunny expressed desires to continue in the world of freelance photo and design stating "I want to do photo and design... I want to do design, but mostly photo. As long as design is still there, I've thought of doing photo freelance and my friend said that it would be cool since I'll be able to do photo when design season is dry."



ing, and operations/technical skills for organizational effectiveness. Additionally, business administration and finance offer insights that help empower youth to have a more holistic understanding of entering and sustaining a creative career.

A discussion of skills as they relate to careers was important to distinguish.

- 21st Century Skills and Creative Habits
- Media Art Skills
- Technical Skills

Having pedagogy and adaptable curriculum that speaks to all three types of skills—21st century, media arts, and technical skills/tools – with the framework of cultivating social emotional learning and culturally responsive teaching and learning would pave the way for media arts CTE courses to better align with career connected learning.

Job Readiness Skills

A recent report, “Job Readiness Skills for Youths: A Clear and Actionable Definition” (May 2018) emphasizes the need for more alignment between matching skills, young people, and jobs/careers, particularly with what was regarded as 21st century skills (we prefer not to call these “soft skills” because it reinforces binary thinking about hard vs. soft skills, with one as taking precedent over the other). This report looks to best practices from Highline Public Schools (in Washington), Chicago, Denver, and Philadelphia cases.⁹ Our media arts focused study, informed by these larger policy discussions about how to get youth employed for the jobs of the future, decided to add a supplemental set of profiles of people talking about jobs and skills they use in media arts occupations. We present them with the awareness that technical skills and careers are ever evolving, but 21st century skills will anchor youth in being prepared to navigate uncertainty.

9. Road Map Project Aligned Funders Rapid Resources Funds, “Job Readiness Skills for Youths: A Clear and Actionable Definition,” May 2018. <http://www.seattle.gov/Documents/Departments/economicDevelopment/workforce/JRT-Report-and-Continuum-R4-Web.pdf>. Additionally, these links were suggested for further reading, <https://www.edutopia.org/practice/learning-through-internships-connecting-students-passions-real-world> <https://bsd405.org/bigpicture/about/what-is-big-picture-learning/internships/> <https://www.highlineschools.org/academic-programs/career-technical-education>.

Methodology and Case Selection

The findings are based upon a comparison of youth experiences in five Seattle Public Schools based on an online survey. In collaboration with Kate Baker, The Creative Advantage Media Arts Project Manager at SPS, we determined that the following schools would take into consideration the variables of place, type of school emphasis, course offerings, and racial and ethnic diversity. One other school was approached but no survey results were returned. In total, N=293 respondents participated in the survey, which on average took 6 minutes.¹⁰ As an incentive, instructors were offered a \$50 stipend that would go towards classroom improvements, in exchange for class time devoted to filling out the survey.

Table 1: Schools chosen to complete the survey

High Schools	Respondent %	Response Numerical
Ingraham	24.23%	(71)
Chief Sealth	23.89%	(70)
Nathan Hale	18.77%	(55)
The Center School	16.72%	(49)
Rainier Beach	16.38%	(48)
Total	100%	(293)

To address the first part, “How are media arts courses building 21st century skills?” we selected five representative Seattle comprehensive high schools for their geographic locations, demographic diversity of enrolled students, and media arts course offerings, which included Ingraham, Nathan Hale, Rainier Beach, Chief Sealth, and The Center School (see Appendix A for demographics).

We had an overrepresentation of participation from graphic arts courses and no participation from intermediate film courses.

Recruitment Strategies

How can we reach more freshmen so that students can take advantage of a fuller range of introductory, intermediate, and advanced media arts CTE courses?

Kate Baker, The Creative Advantage Coordinator at SPS, responds by writing: “For district-wide impact, we would need to shift the curriculum for technology courses at middle schools. There are many complicating factors as to why this is easier said than done.”

10. A set of pre-test questions was piloted prior to the larger survey implementation. In September and October 2017, I attended meetings or workshops with SPS staff, OFM, OED, Try a Trade collaborators, Scott Maclin, and Seattle Interactive Conference. In December 2017, a pre-test of the survey questions was administered to Cleveland High School, a STEM focused high school situated in the Beacon Hill neighborhood to a small sub-group of students in Bryan Gordon’s media tech classroom.

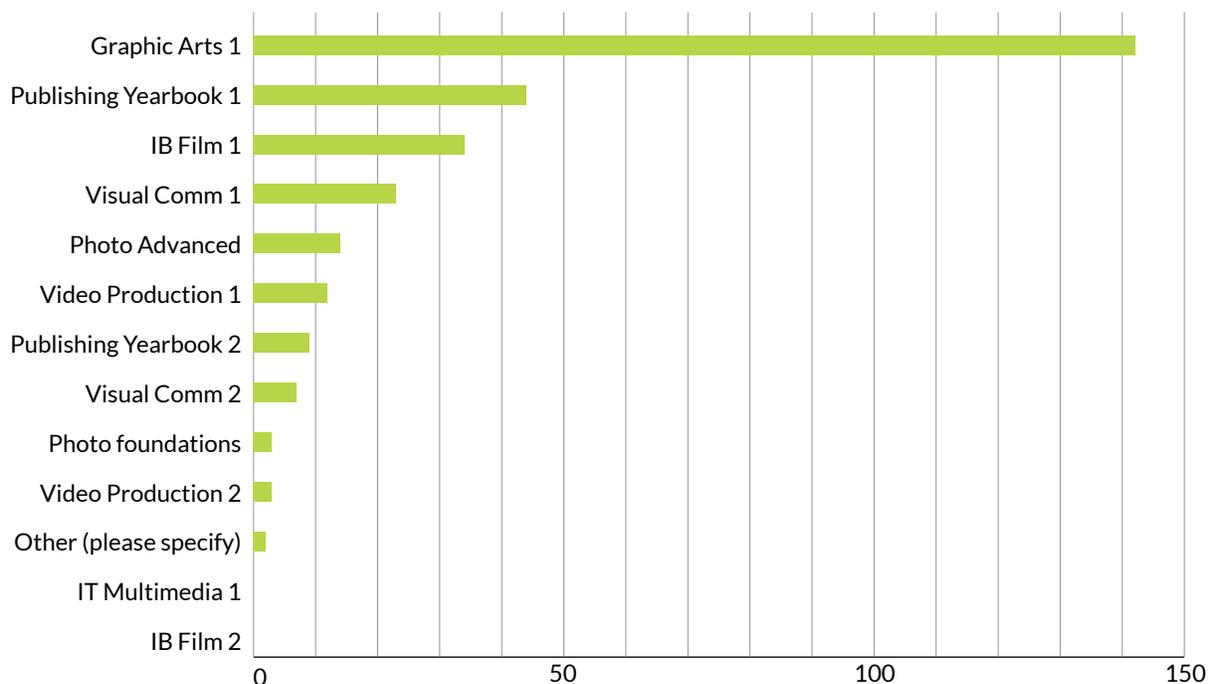
Another approach is to create more media arts courses for the middle school level. SPS now has video, photo, and graphic design courses; however, it is added on a school-by-school basis, which means that most of these courses are not offered widely. In fact, they are currently only offered at McClure (Queen Anne), Salmon Bay K-8 and Whitman (Ballard/NW). Middle school CTE courses due to curriculum guidelines have to fit under the STEM umbrella. Baker further adds: “I had to keep re-writing the frameworks for photo, video, and graphics last spring because [the District] kept rejecting them for insufficient alignment with STEM, but we eventually got there.”

The authors and Kate Baker believe that the best recruitment gateway might be through the intensive Media Arts Summer Skills Center. Additionally, counselors/student success coaches, school-community, and scheduling play a key role in recruitment and retention of students in the media arts CTE courses.

Table 2A: Courses

Student respondent's course	Percent	Numerical
Graphic Arts 1	48.46%	142
Publishing Yearbook 1	15.02%	44
IB Film 1	11.6%	34
Visual Comm 1	7.85%	23
Photo advanced	4.78%	14
Video Production 1	4.1%	12
Publishing Yearbook 2	3.07%	9
Visual Comm 2	2.39%	7
Photo foundations	1.02%	3
Video Production 2	1.02%	3
Other (please specify)	0.68%	2
IT Multimedia 1	0.0%	0
IB Film 2	0.0%	0
	Answered	293
	Skipped	1

Graphic 2A: Courses



Web Development/Digital Content Creator in the Music Industry

Mikayla Ketner, Freelance Digital Content Creator



Mikayla is a Web Developer and Digital Content Creator. Originally from Sacramento, Mikayla moved to Washington for college in 2014. Her involvement with college radio shaped her interest in the entertainment tech industry. After getting an internship with the Office of Film + Music, she took a year off from school to devote to her career in media tech arts. Mikayla's previous work includes web design and content creation for Distinction Music Management (DMM), Sub Pop Records, and Washington

and communications classes she took in college. Unfortunately, college is expensive and Mikayla quickly learned that there's no classes to take on getting into the music tech industry. Utilizing her internship with The Office of Film + Music to strengthen her networking and gain out-of-classroom experience, Mikayla was able to apply knowledge she learned on her own and in the classroom to real world experiences. While comparing the classes she took at

Washington State University, the practical application of these skills through internships and networking was where she saw the most growth in her role currently.

While speaking about the DMM team, Mikayla emphasized "We all have our day jobs you know the reason we're able to [continue building DMM]. The side hustle is real," explaining a time when she had two jobs and an internship to make ends meet. Regardless, each

21ST CENTURY SKILLS

Collaboration: "We like to work with other people in the music scene and when you have those other outlets it's easier because you can leverage each other's resources or, for example, outsource a photographer for your artists."

Creativity: "In the DIY scene that we are working within, there isn't that much money but there are a lot of cool ideas and genres that aren't really out there yet."

University's student radio now focusing on amplifying marginalized voices in the Seattle Music Scene particularly POC and LGBTQIA+ individuals.

Breaking Through: Mikayla's typical workload involves web design and blog output. For Mikayla, learning the skills necessary to do this work in Web Development and Content Creation came from web design, multi-media,

member of the DMM staff focus heavily on mastering skills and distributing that knowledge. For example, while Mikayla does blog output, everyone is very involved in the process and gets to see exactly what makes a good blog post (post calendar, imagery, content, etc.).

Mikayla is in the middle of her gap-year and hopes to return to school to continue her studies in communications and tech related studies.

Part Two - Youth Responses to Curriculum

Frequently Mentioned Assignments, Tools, and Skills

Students were asked to describe their favorite assignment in the media arts courses, below are selective quotes from the hundreds of responses.

Communicating About Self and Others with Visual Impact: Graphic Design with Adobe Photoshop, Adobe Indesign, and Adobe Illustrator

Self Portraits and Scanning Objects into Photoshop

“My favorite project we’ve done so far in this course is our **Photoshop self-portraits**, where we used items and things that we felt described ourselves and made a collage. I appreciated this assignment especially because it combined the use of a lot of different skills and allowed us to play around with different techniques and tools. *Scanning objects to a computer was also a requirement, and that was technology I had never used before, so I was thankful for the skills I gained in that regard.* Additionally, the Photoshop self-portrait project used some of the skills we practiced when we were creating design projects using [Adobe] **Illustrator** and expanded upon those. It was *fun to play around with depth and layering* on [Adobe] **Photoshop**, with the layer mask tool. I really felt like this project only touched the surface, and I would still enjoy more projects based in Adobe PS.”

“I am able to have a visual idea and create it with the tools given in the apps we use. I can make awesome stuff that can *make people think and be wowed!*”

Colors and Fonts in the Inspirational Quotes Project

“My favorite assignment was called the **Quote Project**, [where] students choose a quote that inspires you and use [Adobe] **Photoshop** to present it in a way that best represents the person who said the quote ... *I learned a lot about how different colors, fonts, and layouts can affect the mood of a document* and it was a fun learning experience.”

Shapes and Orienting Objects in the Name Mandala

“My favorite assignment was the **name mandala** where we incorporated our names into a complex mandala using **Adobe Illustrator**. We put our name into a triangle (1/8 of a square) and copied and oriented the triangle to fill the whole square and make the name harder to find.”



NAME MANDALA HAND DRAWN, THEN RE-CREATED USING ADOBE ILLUSTRATOR.



IMAGES OF STUDENT WORK PROVIDED BY WYN POTTINGER-LEVY

Creating a Poster: Advertisement Design

“Producing an advertisement using both [Adobe] **Indesign** and [Adobe] **Photoshop** and creating a poster of a play of a rendition of Cinderella [through] teamwork and [Adobe] **Photoshop** were my two favorite assignments in class.”

Meaningful Digital Image Mashups: Designing Personal Patches

“I loved making a “personal patch” in [Adobe] **Photoshop**. It was incredibly satisfying to take and pull images from different sources online and put them together into something with more meaning than any of the parts individually. Image-creating skills are very, very fun to work on, just to tinker around with.”

Incorporating History into Photography: Inspiration from influential photographers in history

“I think my favorite assignment that I’ve gotten this semester in **photography** is the one we’re doing now, with taking a photoshoot based off of any influential photographer from past or present. It’s fun because I get to choose the style and quirk/change it how I want.”

“My favorite activity in photo is experimenting with filters. It’s cool to see how one photograph can look completely different depending on how you can distort the light.”

Creativity and Collaboration in 3D Art: Film/Video/Music

“**In film 1** my favorite activity/assignment are film projects because we get to organize, collaborate, and become creative as well as get a taste of what filming in the future could be like and gather skills to deal with the problems that come with it.”

“I like **making short films or skits** because it allows me to use my creativity and do what I like doing which is acting and so I like this class and wish I could stay in it for a long time.”

“Working with **KEXP 90.3 FM** to make music videos.”

“We made a 10-minute comparison **video of two movies**. I was in charge of editing specifically, but was also part of the creative design. I had never edited such a long video and while at first it was stressful in the end I found it to be a lot of fun. I was really proud of our final project.”

Practical Assignments: Making Press Passes in Yearbook

“We got to design ‘press passes’ for football games and other events so the people around us knew we were a part of the yearbook. I found learning how to use [Adobe] **Photoshop** a very useful skill.”

“Creating the framework for the yearbook that everyone will use throughout the school year and interviewing people for stories.”

“I enjoy working in a group to create pages for the yearbook.”

Skills Development

For CTE media arts teachers and administrators, the following content analysis reveals the social skills, assignments, and technical tools that frequently came up in the survey in response to what assignments students most enjoyed.

Table 3: A summary sketch of skills and their connection to assignments students mentioned

21st Century Skills	Media Arts Assignments	Technical Tools and Skills
<ul style="list-style-type: none"> • Communication: Journalism, storytelling, interviewing techniques <p>Students use imagery and sound as a way to tell their story, particularly when words are out of reach such as the case for ELL students who might face other obstacles as well</p> <ul style="list-style-type: none"> • Critical thinking about media/film theory • Collaboration: teamwork and groupwork • Perseverance: Project management 	<ul style="list-style-type: none"> • Poster making/designing an advertisement or flyer for a school club • Logo design for small businesses • Yearbook page layout (based on interviews with teachers and peers) • Photoshop self-portraits • Experimenting with camera filters in photography to change the mood of a picture • Making music videos with KEXP 90.3 FM • Making a name mandala • Making and editing short films or skits • Quote project • Design press passes for sports event • Web design using wix • Meme making 	<ul style="list-style-type: none"> • Adobe InDesign • Adobe Illustrator • Web design • Film editing • Making and uploading YouTube video clips • Scanning or manipulating objects

User Experience (UX)

David Harris

David recently graduated from the University of Washington Human Centered Design and Engineering (HCDE) program. There, David developed his design and user experience skills to solve problems around Seattle.

The User Experience (UX) and relatedly User Interaction (UI) field consists of learning different techniques for approaching and building software, technology, products, and services that are user-centered. A UX designer takes into account the human aspect of building and designing.

HUMAN CENTERED DESIGN ENGINEERING (HCDE)

According to the University of Washington, HCDE designs solutions to global challenges by tailoring technology to human needs and interests. By employing engineering approaches rooted in a broad range of disciplines, they investigate the interaction of people with technology and technical development.

In a world where the fast pace of subscription-based software updating is phasing out what was a more steady pace of development with software ownership where users would own software for longer periods of time, it is becoming necessary to be able to think on the fly and to communicate those ideas to an audience. David underscored the importance of people of color (POC) representation in the UX field" as one of the approximately 2% African Americans in his graduate program, David explains how "a lot of the things we use every day are missing out on truly connecting with and being made for

marginalized voices in community, people, and groups."

For his graduate capstone, David is working on ways that people and things around Seattle can move in a more circular way focusing on reverse logistics, trying to address the challenge of why it is so easy to get something delivered to our doors but so difficult to return it.

David cites lower barriers in the UX and UI field than in other tech-heavy fields such as software design and engineering. In addition, the proliferation of for-profit programs such as General Assembly and Galvanize also exist as alternate routes for UX certification.

Typically, students in David's HCDE program work for Amazon, Microsoft, Google, Facebook, and other large and small scale tech corporations.

A UX salary ranges from \$60K to \$70K and upwards of \$130K. Given that education is so expensive, David pointed to online courses as an inexpensive but effective route into the UX world.

David is the Start Up Advocate for the City of Seattle's Office of Economic Development.



Emergent Themes

These were emergent themes about the nature of the assignments. Curriculum that is relevant and builds upon intrinsic motivation seem to resonate more with students and can be more impactful. Intrinsic motivation is defined as the form of motivation when people seek enjoyment, interest, satisfaction of curiosity, self-expression, or personal challenge in their work.¹

Projects that draw from content that is contemporary pop culture and/or about social (injustice) themes

“My favorite part about yearbook 1 is getting to work together with fellow peers to create something that a large group of fellow students/peers can enjoy. Talking about things in the current media aka pop culture interests me greatly.”

“I enjoyed watching, analyzing, and discussing the film *Moonlight* (2017) the most. Its cinematography was very aesthetically-pleasing and its script was very well written. It expanded my horizons as to what a good film can look like.”

“The Black Lives Matter movement is my favorite, because it allows us to express how we feel on situations that are going on in the Black community and have fun with it. Becoming more experienced with camera work.”

Semi-Structured Assignments with Flexibility

“My favorite assignments so far have been the ones that are more free-form, where the student has more freedom to do what they want with their designs. For example, my favorite assignment so far was when we designed a flyer for a LGBTQ+ dinner, which gave me room to see how I, personally, could fit a diverse set of people into a flyer using what we’ve learned in graphic design. Each person was a different color of the rainbow, and they were all talking over a dinner table-- it was very fun to make!”

“I don’t really know my favorite assignment, but I do like doing assignments on my own—at least outside of school.”

“I liked making the pictures of animals in Illustrator because we had freedom with what we wanted to do. Projects where we have more freedom I enjoy more

1. By contrast, extrinsic motivations are outside of a person’s engagement in the activity, they arise from outside of someone’s control such as deadlines, promised reward, praise, critical feedback, surveillance, and so on. See Teresa M. Amabile, “The Motivation for Creativity in Organizations,” the Harvard Business School, Jan 23, 1996.

Visual Communications

Ronald "Otts" Bolisay, Digital Media Specialist

Ronald "Otts" Bolisay, like many other creatives, is self-taught in graphic design. He started with Aldus PageMaker in college during the 1990s to work on newsletters for the student LGBTQ group. This made learning InDesign and Photoshop easier once he started working

TECHNICAL SKILLS & TOOLS

Adobe Creative Suite, Final Cut Pro, After Effects.

at non-profit organizations, and he now uses the Adobe Creative Suite in addition to other software and analog tools.

Otts immigrated to the US for school by pursuing an English major at Florida International University in Miami, Florida; prior to this, he grew up diasporic Filipino in the Bahamas. Otts never saw himself as creative at all. Courses such as those offered through The Creative Advantage, with culturally relevant and anti-racist pedagogy, would have been transformational in a more direct pathway to where he is now.

For Otts, visual communications encompass animation and motion design, illustration, video production, data visualization, graphic recording (also referred to as reflective graphics), and comics. "Many of these disciplines overlap, so

facility in one means a leg up in another. You may be more qualified than you think across a range of fields."

Otts reiterated: "What's exciting about visual communications is that people become visibly excited to find non-traditional or interesting ways to present information they've typically approached in a very standard, stale way. Which makes others more excited to read, learn from, and share it. And that's kinda the point isn't it? Move people to pay attention, show up, take action."

On cultivating one's aesthetic: "There's a ton of online courses and YouTube videos to teach you technical expertise, but honing in on your artistic style and taste is cultivated through overcoming your insecurities in making things, getting as well as giving peer review/feedback and finding a work environment that trusts your creative potential." Otts achieved this through full-time jobs on his way to getting US citizenship, and side hustles, including work at the City of Seattle Office of Arts & Culture, the Northwest African American Museum and OneAmerica, where he discovered a passion for weaving strong visuals, art and creativity with social change work.



because I don't like being forced to do things I am not interested in. Especially in an art class where I should have the most freedom with my work."

"The Photoshop project felt more important than some of the other work we have done in this class. That was the first time I really felt like I was doing anything arts related. The standard we are held to for normal photo assignments seem to encourage following rules instead of creative freedom so the chance to use Photoshop was refreshing."

Getting youth out of their normal comfort zone for creative new experiences

“Doing things I would not normally do, for example, going to [sports] games and taking pictures [for yearbook].”

Desire for Case Study Approaches and Practical, Business and Career-Focused Assignments

“Something I really like that the teacher mentioned we would be doing is that in our learning process we *would actually be working hand in hand with small business owners from all over Seattle rather than making projects based on fake prompts.*”

“My favorite activity so far, was the **advertisement project**, specifically only making the ad, none of the other preparations of going in depth about ads. Just letting us find work on our own and if we wanted to ask for help we could if we wanted to. All the boring lessons took the fun out of the whole thing, in my honest opinion.”

“My favorite activity in this class was **creating an advertisement** using various tools (Photoshop, InDesign, etc.). This project advanced my knowledge about the resources that exist out there, but also gave me a sneak peek of what it would look like to work with a client as a graphic designer.”

“My favorite activity is to be the news anchor for Rainier Beach News.”

“I like using Photoshop and www.wix.com to make photos and a website.”

Miscellaneous

“Some of my favorite activities are acting, singing, dancing so I guess that applies to the media arts but I feel like we need more acting classes because that’s what I’m interested in.”

“Producing Valentine’s Day Cards because we got to choose our own topic/concept which meant we could make memes. Making memes is fun.”



EXPLORATION OF FONT ELEMENTS
IMAGES OF STUDENT WORK PROVIDED BY
WYN POTTINGER-LEVY

Audio Engineer

Julian Martlew, KEXP 90.3 FM

Julian Martlew is a Seattle-based audio engineer who has been working in radio, live sound, and broadcast engineering for the past 17 years. After getting his degree in cultural anthropology and being unsure of his future forward, Julian attended the Art Institute of Seattle to study Audio Engineering. Using his knowledge of sound and editing, Julian has been an integral part of KEXP's reputation as a community-based and volunteer-run discovery station with a dedicated fan base.

Alongside education, Julian is an avid self-learner. Julian emphasized collaboration and empathy as some of the most important skills when it came to getting to where he is today. "Education, in my case, was a direct line to where I am but it's less about school and more about collaborating with teachers who helped me with opportunities." These opportunities led Julian to jobs as recording assistants where he would be tested on his microphone and sound

TECHNICAL SKILLS & TOOLS

DAW (Digital Audio Workstation), Mic placement, mixing, mastering, live sound rules, radio and broadcast technology

theory knowledge to the top of the Space Needle where a few years ago he recorded Mudhoney for a KEXP session, a project he was particularly proud of.

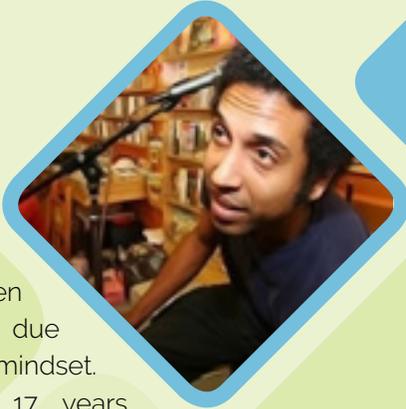
Julian has been working as an audio engineer since 2000 and has been able to do so, in part, due to his entrepreneurial mindset.

Throughout the past 17 years, Julian has worked side gigs as a cook, conference audio coordinator, and contract worker. When considering becoming an audio engineer, Julian advises "Be open to what the world needs of you. If you want to work in sound, video, or media, know there's multiple connections and any real audio engineer will tell you that it's not always glamorous and that you may not always be in the studio."

Julian hopes that KEXP will continue to grow with more live broadcasts and in-studio sessions, smashing all expectations of what they can do. To students coming up in audio engineering, Julian suggests getting a hold of any DAW (Digital Audio Workstation) software.

Whether it's the free programs GarageBand and Audacity or Pro Tools (the recording standard) "start making stuff" Julian stressed. "Make bad beats and cheesy techno. Record a variety

of things even if it's Grandma telling a story so you can learn about background noise or audio clipping... just start doing it."



Q&A with Wyn Pottinger-Levy

The Center School, Teacher

We interviewed a graphic design instructor for her perspective on curriculum, students' skills, their favorite assignments, and challenges they face in the classroom.

Interviewer: Please tell us a little bit about yourself.

Wyn: Since the Center School opened in 2001, I was hired to teach dance. Prior to that, I was an art director, freelancer, designer and creative director, for a number of advertising agencies. I worked for large agencies, like Kraft Smith (now Publicis) and small shops. Now many of these businesses have closed, including my latest favorite, the Wexley School for Girls.

Interviewer: What assignments have your students liked the most?

Wyn: They almost always love any new assignment, the idea of a fresh start is always encouraging.

Learning the new software, I try to embed a playfulness into the first assignment, so that they understand a little bit why they are learning it and can enjoy what they can make. I let them letter their name, and with their name, they create an iterative mandala. Where they learn a keystroke that repeats their name in a circle, a radial repeat, it's fun and it's fast. I have them do it by hand first, then they use the tracing tools, transfer it into a jpeg and then they see the workarounds. The students ask, "You mean, I don't need to learn how to draw? I can use the tools?" At Halloween, we discuss Dia de los Muertos and create a digital calavera; students learn the bones of the body, as they use the tool called the blob brush. A white calavera on a black field, they decorate it. It's a 90-minute lesson. The tools are fast. I think the assignments that they

can see the beginning, middle, and an end that are within their reach, they like the most. It requires scaffolding, repeating, demonstrating – and mostly, one-on-one help.

I have them make badges of their accomplishments. Like Mozilla's Open Badges concept, where adults can share their earned badges for certifications in their professional lives.¹ We create digital badges we can use on our resumes.



Wyn Pottinger-Levy

I have them do a self-portrait, but they can't use a pic of themselves. They have to scan their clothing or jewelry or something they have at home that is special to them. They bring small fuzzy toys, shiny trophies, house keys, earbuds -- all are then scanned. They always scan their phone and then use Photoshop to make a lovely collage and to make a layered collage.

Interviewer: Tell me about the technical skills, software, if any.

Wyn: My students all learn the Adobe Creative Suite, Illustrator, Photoshop, InDesign. Industry standards, they would need to get a job. Even if you are going to work at a law firm, clinic, or coffee-house, it would be nice to get the skills to better the communication with your clientele and the public. I hope it hooks them to want to learn more. They can get into video editing and web design.

They learn to use a Mac system, a server, and a lot

1. <https://wiki.mozilla.org/Badges>

of the collaborative work, file management. What's a jpeg, svg or png, etc. Also as the industry requires you to work collaboratively, you'll need to share with colleagues and clients, on either a cloud server (here it's a school server). They need to keep the file management and nomenclatures the same. If client doesn't have software, how are you going to send it to them to open? Better visual communication tech skills in general, besides the software. More collaborative tech skills.

Interviewer: What suggestions do you have for CTE courses in the media arts as we build out and expand The Creative Advantage Initiative?

Wyn: More web design-based stuff, I don't teach that, it's not in my wheelhouse. I've been to coding classes, try to stay one step ahead of the class. At my school we do not offer anything beyond the basics. I'd love to see more kids have exposure to coding. In the design and technical world, being a designer and a developer, you're a unicorn! Very desirable.

Interviewer: Web-design is offered on the business side?

Wyn: If they are going to have an arts pathways, it doesn't exist in a very transparent way. I know that media arts is a new concept, and I feel honored to be a part of it. Within the structure of the CTE office, it really is hard to find the details in the pathway. Any old frameworks, the artistic components. There's not a high trackability in the state level. Arts pathways is not that clear.

Interviewer: What areas for curriculum improvement are you considering, and how can we support your efforts through research or professional development?

Wyn: I would love to know if my curriculum is aligned with what people in the industry would

want these young people to be seeing and learning. I try to change it up and keep it pretty elastic. I would love a check point on my curriculum. I try to improve it and refine it to different learning styles, I try to listen to my students and pay attention to what they are doing, I ask them to share and shout out, what do you notice, what do you see. What do you notice and share. My students are such content consumers, not content creators. It's exceptional to find a HS student who is able to do both. More research about what young people are learning and love to learn. And professional development – I would like to know more about what are people teaching in their classes. There's Michelle in West Seattle. And Sarah Martin at Chief Sealth.

Interviewer: Please determine which 21st century skills you feel your assignments utilize and refine the most, and if so, how?

Wyn: Creativity -- a lot of times they're already creative, they just need to see how to channel it.

Collaboration - If I set up an assignment where they need to collaborate, they know what that already looks like from their other classes. Learning to share tasks in creative endeavors is new territory, but important in future work situations.

Communication - They communicate well with me. They protest deadlines or added work. I don't know if they share amongst themselves in a communicative way the learning from class, unless we make presentations and they talk about their work/process. During class, most of their focus is on their individual computer screens.

Perseverance - This is one of the biggest challenges.

Growth Mindset - I feel exposure to the Internet has made students feel like so many people do things so well. They don't realize that a lot of work goes into making things that we enjoy, collectively.

I would like to facilitate more growth mindset in my young learners as I think those are important qualities. I've structured the course so that some things take longer than others. I feel that oftentimes they want to do something quickly, and do it well the first time, which is not always a real expectation.

Accidents happen, but good work is never accidental. And then sticking with something and then finishing it. Perseverance, a lot of times they'll spin their wheels, it looks like they are persevering, but they might be distracted by their phones, tucked under their lap. They respect expertise, but not sure if the mindset is there to learn from their elders. I use

current events with a design focus, like a company redesigns their logo. Or the new Oreo packaging, thin Oreos, which featured multiple packaging iterations, using the same software. We play "How Did They Do That?" (wondering how software achieves cool effects), a game designed to learn new skills.

Wyn shared these additional learning tools for students:

- General Assembly
- Lynda.com
- <https://www.skillshare.com/>
- <https://www.creativelive.com/>

Designer (Human Centered, Graphic, & VR)

Jordan Green, University of Washington



When thinking about his future, Jordan wants to continue figuring out ways to help assist public sector, non-profit, and academic organizations in understanding how digital tools can help achieve social good. Growing up in San Francisco in the late 80s was pivotal to Jordan's development as a designer. "I was coming into my own as a young adult seeing technology and how technology could be used to really help and connect people. I learned to make geo cities for Sailor Moons and would look at how to make my background certain colors using HTML code." After moving to Seattle and taking a class from General Assembly for Human Centered Design and Engineering, Jordan found himself in a position to tackle social good while using technology, design, and art.

When speaking on skills, Jordan put an emphasis on 21st century skills explaining how much of his work comes from being able to meet people where they're at, hear what they're saying, and solve problems. The ability to collaborate and to think creatively are necessary in this work. It's not just about tech, Jordan emphasizes. It's also about understanding how human beings use tools and how we relate objects. Jordan

doesn't discount the hard skills. To any high schooler interested in graphic design and VR, Jordan suggests learning HTML, CSS, and JavaScripts (which he says will change your life). Color theory and typography are also points of emphasis given that they directly affect how we interact with what we're seeing.

When thinking about his future, Jordan states he doesn't know specifically what's next. He wants to continue figuring out ways to create spaces for queer people of color and other marginalized identities online, continue to communicate ideas and stories through design, and continue helping the public sector. For high schoolers, Jordan emphasizes the importance of finding a community of people who are interested in similar things and to join them (while staying humble). Particularly for communities of color, he states the importance of putting yourself in environments that allow for failure to learn that failure is ok. For this he heavily suggests theatre classes.

Q&A with Dr. Lauren Berliner

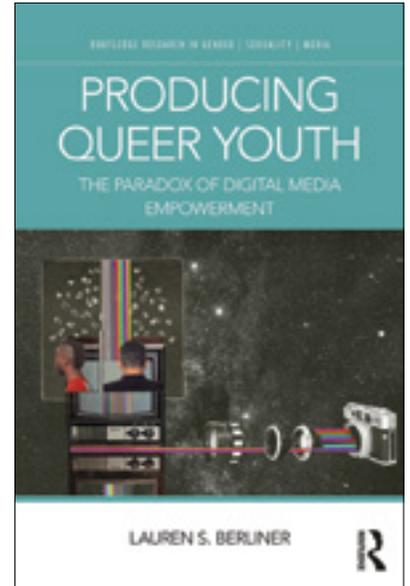
UW Bothell

ARTS did an interview with Lauren Berliner, the author of *Producing Queer Youth: The Paradox of Digital Media Empowerment*. Routledge, 2017, about the media arts and career connected learning.

Interviewer: Why do you think youth especially POC and immigrant/refugee youth gravitate towards digital media and storytelling? In our youth assessment, many enjoyed components of instruction that allowed them to go out into the field, collect stories, or tell their own story in the form of 2D and video production.

Dr. Berliner: Digital media and storytelling allows for different modes of self-representation than traditional literacies. There is more room (or at least appears to be) for non-linear narratives and abstract thinking, which opens up more space for what Diana Taylor would refer to as “the repertoire” as opposed to Western, archival, text-based systems of knowing and reproducing knowledge. I think most youth, regardless of their identity, gravitate to non-textual forms of communication, but if your people and your language have been systematically questioned and oppressed throughout history, I can see why new media forms may appear to offer new opportunities for self-representation and media circulation. As someone who works with many international students who are learning English, I can attest that non-verbal forms of communication are very popular for this segment of the population. Furthermore, educators are less likely to have a well-developed system for assessment of digital media, so it may feel like there is more room to explore and experiment. Finally, the image reigns when it comes to representing truth, and youth at the margins are keenly aware of that.

Interviewer: If a young person in the Seattle Public Schools takes graphic design 1, video production 1, film analysis, etc. in [our media arts skills](#) centers, how might they build upon those skills at UW Bothell, in what majors, classes, or other venues



for obtaining intermediate and advanced media tech coursework? What type of career connected learning/internships, help can they get? Your response can definitely be speculative since we’re also still speculative on how to articulate these career pathways in an ever-changing economy.

Dr. Berliner: Truthfully, they may find some of our courses redundant! They would definitely find more opportunities for more advanced media tech work in our Interactive Media, Interdisciplinary Arts, or Media and Communication Majors. They may also find themselves wanting to major in something else and able to utilize their media tech training. We have a Digital Media studio where they can receive help and borrow equipment. That said, we are pretty clear with students that given our budget, we are not a school that is going to introduce you to the latest in digital media production technology. We are about teaching frameworks and critical approaches most of all, as we feel these are the most pertinent skills in an ever-changing economy.

Virtual Reality

Nikki Melo, Operations Manager, VREAL

Virtual Reality was not a field Nikki Melo thought that she would be getting into. As an English major at the University of Washington, she found her way in through a variety of internships. After graduating, Nikki had an opportunity to

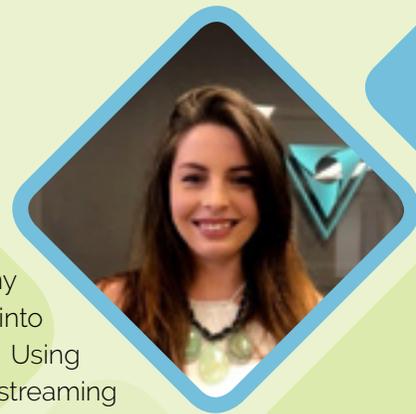
TECHNICAL SKILLS & TOOLS

Sketch Up, Unity 3D, Unreal Engine, Blender, Coding (ThreeJS, A-Frame).

transition into operations within the tech field and found that her ability to communicate, convey, and argue on behalf of creative ideas benefited her in getting to where she is today with VREAL.

VREAL is a company that turns VR games into shared experiences. Using the intersections of streaming technology, virtual reality, and social interaction, VREAL has been working at getting users to be able to interact with their friends' virtual reality streams. Within VREAL, Nikki focuses on business needs coordinating with the engineers and creatives to make sure that the work they're doing is able to continue.

Nikki cites gaming schools, certifications, and online coursework as a way that people who are interested in the virtual reality field are getting their start.



We do have something on campus called the Digital Futures Lab, where students collaborate to design and market video games and apps. It is run by Jason Pace and Aina Braxton. I encourage you to reach out to them too!

Interviewer: What are some things we might need to consider in trying to connect media arts/digital tech in the high schools with the jobs of the future?

Dr. Berliner: Well, I'm all about encouraging students to be thoughtful and reflective about the process over the product. I think too often schools are eager to get the latest in technology into students' hands, and while that is great, it can only take them so far for so long. Interrogating images, scopic regimes, and ways of seeing and hearing that we use to produce and reproduce knowledge are most important. Also, I would worry about investing too much

in the equipment over the kinds of things students might need to have in place in order to be successful makers. Like food or translation services. Finally, I think it's really important to not assume that students want to make a finished project or make anything at all. Techno-enthusiasm is often on the part of the adult educators, not the students. Some will be just as happy with very basic media experiences, and that's okay!

Aspirations

The following scales measured aspirational desires for more media arts courses.

Table 3A: Youth aspirational statements about media arts

Aspirational Statement: I want to take more media arts courses (such a graphic design, animation, video editing, etc.)						
1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
14 (4.8%)	36 (12.2%)	77 (26.2%)	95 (32.3%)	71 (24.2%)	293 (99.7%)	3.59

Table 3B: Connections between courses and careers

Aspirational Statement: I see a connection between my media arts coursework and internship possibilities.						
1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
13 (4.4%)	49 (16.7%)	83 (28.2%)	108 (36.7%)	41 (14%)	294 (100%)	3.39
Aspirational Statement: I see a connection between my media arts coursework with a career field.						
1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
14 (4.8%)	50 (17%)	72 (24.5%)	93 (31.6%)	63 (21.4%)	292 (99.3%)	3.48

Table 3C: Student support from teachers and community

Aspirational Statement: I feel supported by my teachers to take more media arts courses.						
1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
10 (3.4%)	17 (5.8%)	97 (33%)	97 (33%)	69 (23.5%)	290 (98.6%)	3.68
Aspirational Statement: I feel supported by my community to take more media arts courses.						
1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
9 (3.1%)	28 (9.5%)	124 (42.2%)	83 (23.2%)	49 (16.7%)	293 (99.7%)	3.46

At the **Center School**, students felt strongly supported by teachers and family to take more media arts courses, and one area for advancement is in drawing a stronger connection between coursework and internship possibilities.

Table 3D: 21st century skills

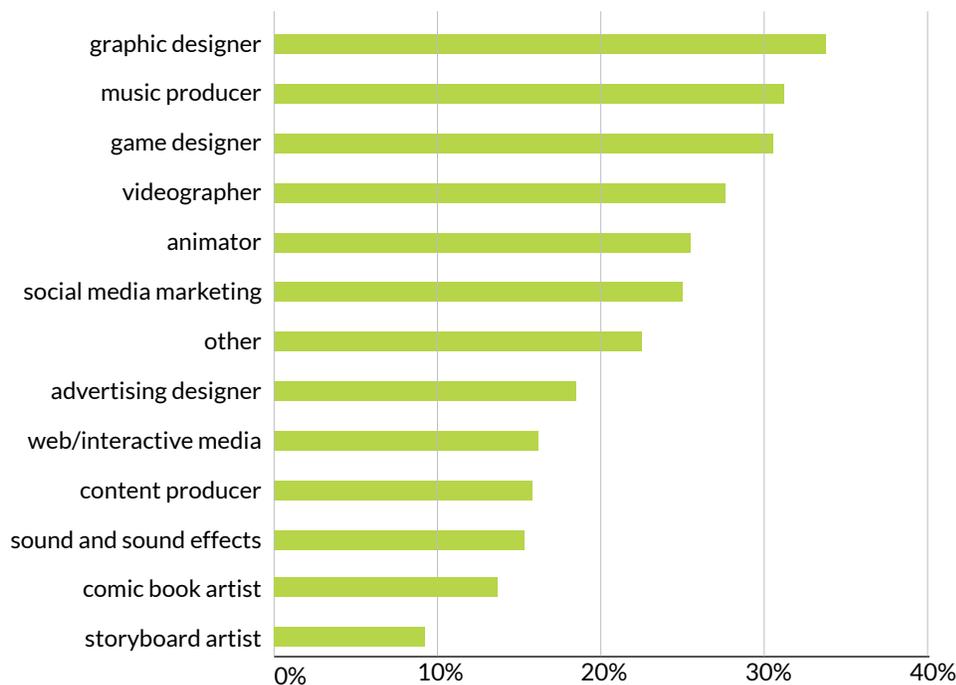
Aspirational Statement: I feel supported by my community to take more media arts courses.							
	1 - Strongly Disagree	2 - Disagree	3 - Neither	4 - Agree	5 - Strongly Agree	Total responses	Weighted Average
Creativity	8 (2.7%)	13 (4.4%)	48 (16.3%)	149 (50.7%)	75 (25.5%)	293 (99.7%)	3.92
Critical Thinking	9 (3.1%)	22 (7.5%)	67 (22.8%)	134 (45.6%)	60 (20.4%)	292 (99.3%)	3.73
Communication	9 (3.1%)	27 (9.2%)	78 (26.5%)	121 (41.2%)	57 (19.4%)	292 (99.3%)	3.65
Collaboration	8 (2.7%)	21 (7.1%)	70 (23.8%)	125 (42.5%)	67 (22.8%)	291 (99%)	3.76
Perseverance	6 (2%)	17 (5.8%)	93 (31.6%)	119 (40.5%)	55 (18.7%)	290 (98.6%)	3.69
Growth Mindset	9 (3.1%)	18 (6.1%)	76 (25.9)	124 (42.2%)	66 (22.5%)	293 (99.7%)	3.75

At **Ingraham** Collaboration was a 21st century skill that was rated higher by a larger cluster of students, but the overall average was brought down to 3.75. Communication, in contrast, at **Rainier Beach**, was ranked the lowest on average.

Media Arts, Career Aspirations and 21st Century Skills

Students could indicate what media art job titles interested them the most. There was an overrepresentation of graphic design students in our sample, which could explain the numeric size of those who were interested in graphic design careers.

Graphic 3F: Job Titles Reported by All Students



Students were also asked about what their plans were for after high school and whether that involved the arts. Some of the responses below speak to the role of creativity and the idea of transferable skills ostensibly learned in media arts courses that support future goals.

The following example supports the strong desire for arts and ambiguity about careers, in spite of 24 students stating that they do see that connection between internships and coursework:

“As for the moment, I am still figuring out what I want to do. In fact, I’m not sure I want to stick to one career. However, I do enjoy design and art, whether it is performance or visual, like graphic design, and using art to communicate concepts. For that reason, I think I will continue to branch out and test my skills in different areas of the arts, as well as continue my education in things like graphic design because those forms of communication capture my interest and challenge both my creative and critical thinking.” (The Center School)

On the other hand, there are students who take the courses for the 21st century skills development:

“My career goals have nothing to do directly with media arts or arts in general, though I think I have learned some valuable skills involving communication, collaboration, and time management.” (Ingraham)

“I want to study neuroscience, which doesn’t directly relate to the arts. However, I believe in acquiring a diverse skillset to make myself a more well-rounded and experienced person, which could indirectly benefit my career.” (Ingraham)

A student who does have arts/acting/theater aspirations in their sights stated:

“My goal after I graduate is to go to college which I’m still looking for my top 5 schools that I personally like. I want to major in acting/drama/theater and want to do running start for my last year of high school then do it again for my freshman year of my college year and get my AA degree so that I can go to any university that I want. I want to pursue my acting career so I can be inspirational to others and touch people’s lives through the work that I do. I want to give back to my community and foster children, homeless people, and children with cancer. It doesn’t matter to me if I win an award for my work, I’ll just know that I touched or inspired someone and that will make me happy.” (Chief Sealth)

Students Who Definitely Aspired toward Art Careers

“Start an animation career and then have my own traditional animation studio to make 2D animated films just for the passion and for being 2D back (in the US) since animation now-a-days is just CGI.” (Ingraham)

“I plan to pursue acting, in either the stage, film, or even voice acting. Nothing will be safe from my desire to ham it up for an audience.” (Ingraham)

“After high school I want to get an internship at some sort of tech and art company like Microsoft. Also I want to graduate college with a digital (animation) art degree. It relates to the arts because the stuff I want to do after high school on an educational level have to do with you having some knowledge of art.” (Ingraham)

“I would actually like to go into a creative career after high school and I think graphic design which teaches the basics of Photoshop is very helpful as this program can be used in many fields not just creative ones.” (Ingraham)

“I want to become an interior designer or somewhere in the creative arts. I will have to use my creative abilities often and present them.” (Ingraham)

Social Media and Brand Strategist

Michael Huang, (Founder) Milli



Michael Huang is a social media and brand strategist, entrepreneur, artist, advocate, millennial, and founder of Milli Agency in Seattle. After graduating from the University of Washington with a degree in marketing and utilizing the tools he learned while growing up on social media, Michael set off to define what it means to have a career in social media. Using Facebook, Twitter, Google Analytics, and an entrepreneurial mindset, Michael has built Milli, an agency with a community focus aimed at bridging the gap between traditional marketing and new media techniques.

MARKETING MANAGEMENT

According to 2017 EMSI data, marketing managers are among the quickest growing occupations, with a 24.6% positive change between 2012 and 2017.

Using his informal education growing up during the period of heavy social media development, Michael was able to inform and connect millennials to those who have worked in traditional marketing for years. "The missing link was knowing how to speak the same language" Michael explained. "For a while, brilliant minds that were artistic were able to do things that worked but then broadcast came and it became

more about advertising dollars and now tech is a big piece that we're having to adapt to and learn how to use."

When it comes to learning these skills, Michael credits his education to teaching him the basics of marketing strategy as well as his own curiosity which was spurred by the ever-growing popularity of social media while he was growing up. "Because I spent so much time on the internet and consuming content through TV, YouTube, and social media, this stuff was coming to me naturally. Things that felt foreign to people before me was a part of my natural language and skillset such as thinking in terms of social media and understanding UX in terms of how a website should run."

To youth who are interested in having a career in social media, Michael says "If you are interested in pursuing a creative career don't get shaken that that path isn't as clearly paved or set in front of you. Just do what you want to do. You're in the most risk averse part of your life so explore and experiment. Social media is here to stay and young people will continue to be the ones to find new and innovative places to innovate in their own way."

"I don't have specific goals, but I know that I want to do something involving writing or language. It relates to the arts because it's another form of expression."
(Ingraham)

"My career goal is to have good skills on graphic arts because it is a skill that involves your creativity and critical thinking which is a good thing even when you choose any type of career in the future."
(Ingraham)

STEM career aspirations with the value of arts skills in Yearbook

A student taking yearbook, who is on the path to STEM careers reported this being useful for the future:

“After I graduate high school I hope to go to college. I will be majoring in Mechanical or Aerospace Engineering along with taking language classes. I don’t really see as to how this will help me a lot in what I will be majoring/working as when I’m older, but I do find yearbook has useful skills for the future.” (Chief Sealth)

“I hope to go into a career in the STEM field so this is very applicable [to] 21st century skills.” (Nathan Hale)

“After high school, I’d like to go into Marine Engineering. This relates to the arts because creativity is used everywhere and the process of design, build, test, improve, repeat (engineering design process) is used in both the arts and in engineering.” (Nathan Hale)

“I plan on going into the medical field. This involves technology and working with your hands so art and tech classes help with this.” (Nathan Hale)

Another yearbook student reported the value of yearbook in strengthening direct observation skills and communication skills in general.

“I’m hoping to become a nurse. Yearbook strengthens my observation skills and also allows me to communicate with those around me.” (Rainier Beach)

“... probably game designer and this relates to arts because arts helps me work with others which I will need to do while making video games.” (Rainier Beach)

Are the arts perceived as a stable career path?

Students express a desire for certainty in their decisions about a career field that is sustainable; perhaps due to the underlying basic needs of being able to live in an expensive city, they want a field at the intersection of technology and media arts:

“I have no clue if media is a stable or reliable field to consider a career in. However, an internship in technology that relates to some sort of graphic production sounds interesting. I also am very interested in photography, which is something that I put a lot of effort into outside of school as well as in. I think photography would be my current first choice in a career path, but again, I’m not too certain on it’s reliability [sic].”

“My career goals after high school are to become enrolled in some type of business classes and I believe it relates to art because I need to be able to come up with new creative ideas to help me and others succeed, additionally I can use my communication skills from interviewing people in yearbook to help communicate with others when I am older.”

This quote below speaks to the perception that arts is not seen as a main source of income, but perhaps an add on supplemented to an hourly job in service or retail:

“I have none [goals] really but I want to go through with art. I want to get a job at Tully’s because free food and drinks at times and then do art on the side and sell it and get that \$\$\$\$\$\$\$\$\$\$ and South Seattle Community College. [sic]” (Ingraham)

Art as Avocational

“I do not have a definite career goal but I am considering physical therapy or something related to medicine or psychology. These do not relate to the arts, however, I am interesting in pursuing photography as a hobby.” (Ingraham)

“After high school I want to study medicine I think it doesn’t relate to arts but I like art too, art is fun.” (Ingraham)

“I think this class relates more to my hobbies than my career goals. I think that I want to study environmental science.” (Ingraham)

Conclusion

We want to emphasize practical themes mentioned in the body of this report, with the following recommendations to arts educators, arts administrators, creative workforce stakeholders, and arts funders.

Emphasize the **process over the product** in establishing classroom norms and assignments.

Skills over technology: Let's have youth obtain technical skills, but not lose sight of the bigger creative workforce picture—we should emphasize the process and the 21st century skills and arts skills, as the technology is ever changing and evolving. Thinking creatively and being imaginative will yield better educational and career outcomes, as the technological tools will change and evolve to meet the demands of productivity and resource constraints. Many software and technology firms function through economic imperative and increase market growth by having subscription access to their products in the hands of young people.

Creative habits of mind can help arts educators and administrators anchor philosophy of thought into the way we design syllabi, assignments, and career connected learning.

The **future of work** is highly evolving. Youth need to be adaptive and able to think critically.

Access to the technical tools might not be readily available to all youth at home, so stressing again the importance of projects that allow them to use their imaginations is going to help them flex their creative muscle.

Social emotional learning happens through storytelling and creating arts classrooms where multiple stories are shared within culturally responsive teaching frameworks. This helps foster a classroom environment where there are a multiplicity of perspectives and empathy points. These things happen in arts classrooms, but especially in rooms where we are asking youth to tell their stories. Young people don't necessarily have a lot of space to engage that way – these are mutually beneficial for learning and building student rapport – the opportunity to critique someone else's work can add to feelings of trust, bonding, self-worth, and persistence and perseverance.

Giving opportunities for **young people to feel safe enough** to share their perspectives and to share and receive thoughtful feedback with each other through the arts can help to build resilience, a growth mindset, and a critical and creative mind.

Visual and Multi-media

Aaron Jacob, Director, Indie Genius Media

Aaron Jacob is a Seattle-based Director for Indie Genius Media and self-described storyteller. Using video, Aaron and the Indie Genius Media team tell complex stories based on Seattle's cultural past, present, and future. Aaron was introduced to film and camerawork in college and has since worked as a cinematographer for Beyoncé's live set, Taylor Swift's camera assistant, and has assisted with other film creatives who he networked with and was able to ask for advice.

PRODUCERS & DIRECTORS

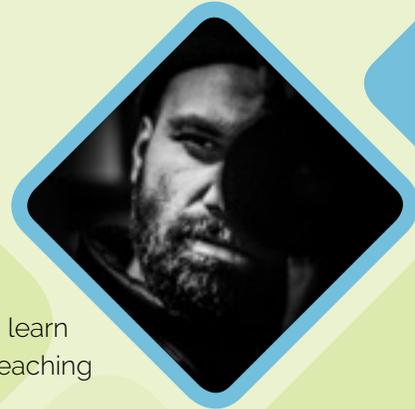
There are currently 1,557 producers and/or directors in the Seattle area. On a separate note, actors are among the quickest growing creative occupation in Seattle, growing 31.7% between 2012 and 2017.

Aaron stressed the importance of self-learning in a world where resources such as YouTube and Lynda have thousands of "how-to" videos. While classes were helpful, Aaron stressed the importance of YouTube's model where you can

set your own pace and learn alongside whoever is teaching based on your needs.

Aaron has been able to make this career work since 2003, which he credits to being versatile, multi-talented, and good with budgeting and money management. "Being able to take a DJ gig or a photo gig for a magazine or someone's music portraits, being a lighting guy, assistant camera guy, personal assistant- having multiple skills under your belt is necessary." Month-to-month, it is common to go from dry seasons where no work is available to a quick turnaround working late every day of the week.

On his future, Aaron states "I want to make feature films. I want to make some TV series. I want to make broadcast projects. I want to do documentary work." On the future of the industry, Aaron spoke on the importance of moving graphics and illustration. "If you know how to create moving images, that will put you ahead of the curve".



As critical race feminist scholar bell hooks writes: "The function of art is to do more than tell it like it is, it's to imagine what is possible."

Appendix A

Descriptive Demographics of Survey Respondents: Racial Categories, Gender, and Languages

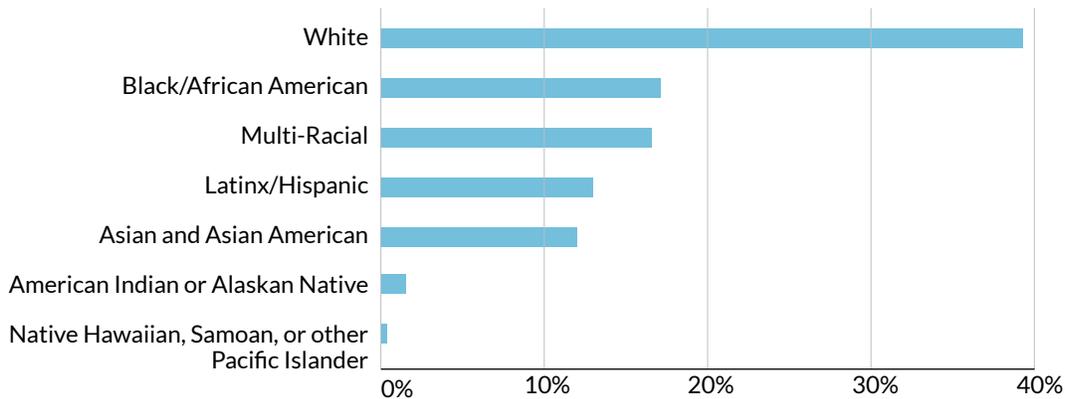
The study design and data analysis presents a descriptive range of interests in more arts courses and career fields/job titles. There is also a demography of race and place that determines who self-selects into these courses. Future directions in this research could be to conduct on-site interviews with students and instructors to complement our findings.

<i>Courses that Participated</i> (N=number of respondents)	<i>School Grade and Demographics of Survey Respondents</i>
Ingraham (International & established IB school) Seattle Sub-region: North	
<ul style="list-style-type: none"> • IB film (N=33) • Graphic Arts 1 (N=22) • Publishing Yearbook 2 (N=9) • Photo Advanced (N=1) • Photo Foundations (N=1) <p>Media arts offerings are IB Film, Photo, Graphics/Yearbook</p>	<p>This enrollment drew heavily from sophomores (N=29), then seniors (N=23), juniors (N=15), then seniors (N=4).</p> <p>The enrollment at Ingraham in media arts courses mentioned here are predominantly White (N=38), followed by multiracial (N=12), Asian/Asian American (N=8), Latinx (N=6), then Black/African American (N=4) and Native (N=1). Within the multiracial category, many reported being an ethnic Asian group and White.</p> <p>The majority of the students speak English all of the time or a majority of the time (N=62), with the remaining who speak Spanish, Tagalog, Thai, and Amharic/Oromo at home (N=8).</p>
Nathan Hale (home of the radio station C89.5) Seattle Sub-region: Northeast	
<ul style="list-style-type: none"> • Graphic Arts 1 (N=54) • Photo Foundations (N=1) <p>Media offerings beyond broadcasting are graphics/yearbook, photo, video</p>	<p>Freshmen (N=21), Sophomore (N=19), Senior (N=8), Junior (N=7).</p> <p>Demographics: White (N=23), Latinx (N=9), Multiracial (N=9), Asian/Asian Am (N=9), Black/African Am (N=5), Native (N=1)*, Native Hawaiian/PI** (N=0).</p> <p>*Two multiracial individuals identify as Native/Indigenous.</p> <p>** Individual identifies as Pacific Islander and Native/Indigenous</p> <p>Languages other than English: Spanish (N=9), then handfuls who speak Mandarin/Chinese, Vietnamese, Mongolian, Amharic, Tigrinya, and Arabic.</p> <p>Gender: Female (N=26, Male (N=25), Transgender (N=1), Non-binary (N=1), and other (N=1)</p>

Courses that Participated (N=number of respondents)	School Grade and Demographics of Survey Respondents
The Center School (Alternative HS with an arts focus) All city draw	
<ul style="list-style-type: none"> • Graphic arts 1 (N=21) • Photo advanced (N=13) • Video production 1 (N=11) • Video production 2 (N=2) • Photo foundations (N=1) • AIE animation/game programming (N=1) <p>Media arts offerings are graphics, photo, and video</p>	<p>Enrollment draws more from sophomores, then freshmen, seniors, and juniors.</p> <p>Students who responded in The Center School courses were comprised of a majority White (N=32), then multiracial (N=9), Asian/Asian American (N=4), and Latinx (N=2) groups. There was a multi-racial Native American student, and many other multiracial and White, self-identified groups.</p> <p>Languages spoken at home: 30% of respondents spoke a language other than English in the home, including Japanese, Vietnamese, Spanish, Swedish, Russian, and Cantonese.</p> <p>Gender: 22 female, 17 male, 5 transgender, 3 non-binary, 2 other</p>
Chief Sealth (International School) Seattle Sub-region: Southeast	
<ul style="list-style-type: none"> • Graphic Arts (N=46) • Publishing Yearbook (N=24) <p>Limited media offerings – graphics/yearbook</p>	
Rainier Beach (new IB school) Seattle Sub-region: Southeast	
<ul style="list-style-type: none"> • Visual Communication (N=23) • Publishing Yearbook (N=15) • Visual Communication 2 (N=7) • Video Production 2 (N=1), • Video Production (N=1), • IB Film 1 (N=1) <p>limited media offerings – film, visual comm/yearbook (focus is on the business side, not art/design)</p>	<p>This pool of students was by the far the most diverse, with a majority of Black/African American students (N=27), followed by Asian/Asian American (N=8), then multi-racial (6), then Latinx/Hispanic (5), and had no White students enrolled (of the multiracial category, one reported being Mexican and White).</p> <p>Languages other than English: Many of the other than English speakers (N=19) were Somali native speakers (N=7).</p> <p>No students reported having a non-binary or transgender gender identity.</p> <p>Two students had participated in the MASCC.</p>

Racial/Ethnic Identity of Respondents

“Racial equity is a goal of Seattle Public Schools and Seattle City government. Please tell us which race/ethnicity best describes you, so we can ensure we are hearing from a diversity of students in the district.”

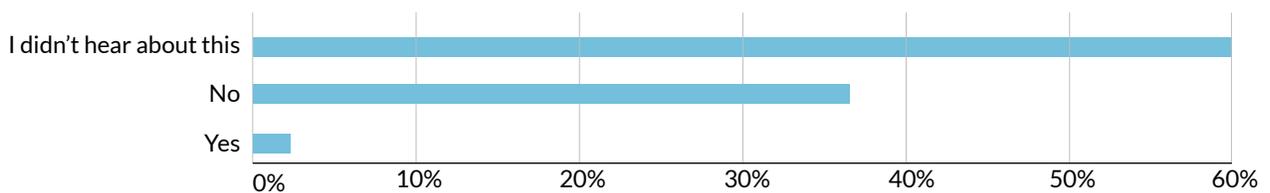


Racial Group	Percent	Numerical
American Indian or Alaskan Native	0.35%	1
Asian and Asian American	12.24%	35
Native Hawaiian, Samoan, or other Pacific Islander	1.4%	4
Black/African American	17.13%	49
Latinx/Hispanic	12.94%	37
White	39.51%	113
Multi-racial (more than one race)	16.43%	47
If you marked multi-racial, please elaborate.		46
	Answered	286
	Skipped	8

(see survey monkey for 46 respondents who gave multiracial self-identifications)

Rate of Summer Participation

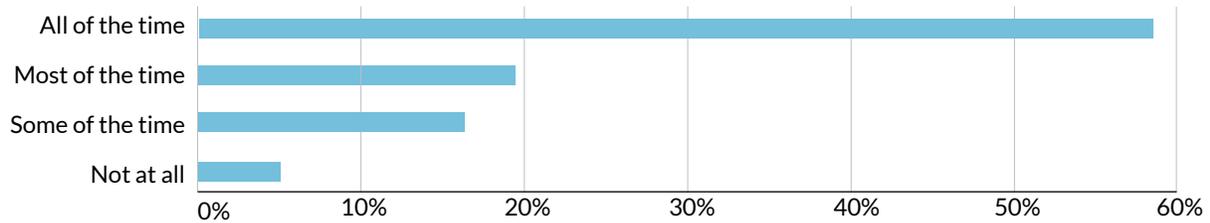
“I participated in the Media Arts Skills Center in Summer 2017”



We need to do a better job of getting the word out about future Media Arts Skills Centers.

English in the Home

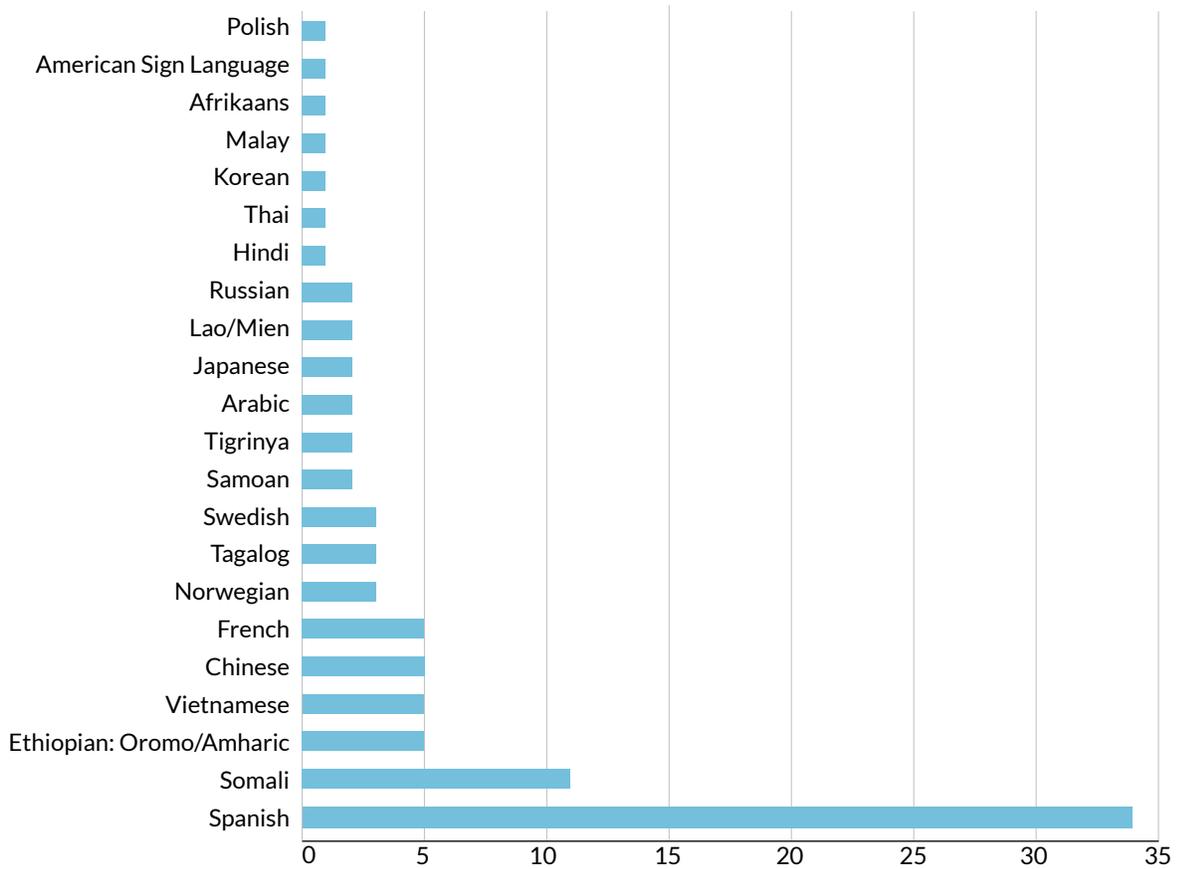
“How often is English spoken at home?”



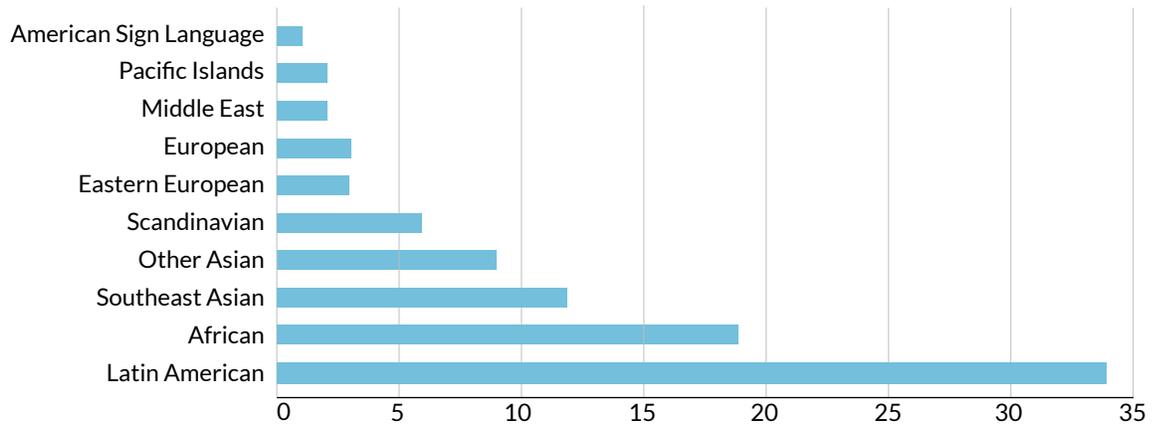
More than 20% of respondents report speaking a language other than English at home. Spanish was the predominant language other than English that was spoken at home by survey participants. After Spanish was East African languages, which include Somali, Amharic, Oromo and Tigrinya, then Vietnamese and Chinese (primarily Cantonese). Many participants are the children of immigrants and refugees, which reflects the make up of Seattle’s newcomer demographics. The largest contrast in demographics was between Ingraham, which had a predominantly White student enrollment, reflective of the North Seattle residential demographics, and Rainier Beach, which had a predominantly East African and African American student enrollment, reflective of racial demographics of residents in the Southeast Seattle corridor.

Answer Choices	Percent	Numerical
Not at all	5.15%	15
Some of the time	16.49%	48
Most of the time	19.59%	57
All of the time	58.76%	171
What language(s) other than English are spoken at home?		98
	Answered	291
	Skipped	3

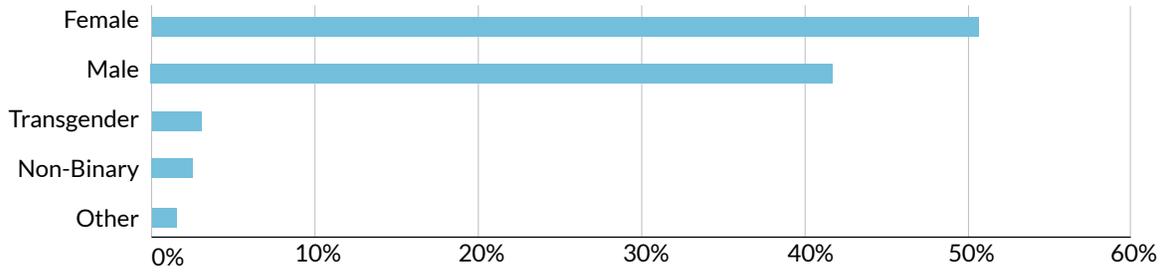
Language Other Than English



Language Other Than English, Sorted by Region



Gender Identity



Answer Choices	Percent	Numerical
Female	50.86%	148
Male	41.58%	121
Transgender	3.09%	9
Non-binary	2.75%	8
Other	1.72%	5
If you marked other (please specify):		8
	Answered	291
	Skipped	3

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Note: All interviewees, with the exception of City of Seattle employees, were offered a stipend of \$25 for 45 minutes of their participation. This involved filling out an invoice form and a W-9 form. SPS teachers were offered \$50 gift cards to benefit their students in the media arts classroom. UW faculty were offered a \$25 stipend for participation in this study.

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Key Terms

Section I: 21st Century Skills and Creative Habits of Mind

Skills identified by education administrators in recent years that allow for students to thrive in school, career and life. The Seattle Public Schools have identified the following as a core component of high quality arts teaching and learning.

- **Creativity and Critical Thinking:** To create new and useful ideas, innovations, and products; and to elaborate, refine, analyze, and evaluate one's own and others' ideas.
- **Communication:** To articulate thoughts and emotions effectively using oral, written, and nonverbal skills; to listen effectively; to inform, instruct, motivate, and persuade; to negotiate; and to give and receive feedback.
- **Collaboration:** To work effectively and respectfully with diverse teams, which involves flexibility, sharing, responsibility, and being open and responsive to new and diverse perspectives.
- **Perseverance and Growth Mind-set:** A belief that intelligence and ability can be increased with effort; a belief in one's own capabilities and capacity to learn. A growth mind-set is foundational to perseverance: persisting in a task through to completion; remaining focused; and looking for ways

Creative Habits of Mind: The "16 Habits of Mind" identified by Arthur L. Costa and Bena Kallick include: Persisting, Thinking and communicating with clarity and precision, Managing impulsivity, Gathering data through all senses, Listening with understanding and empathy, Creating, imagining, innovating, Thinking flexibly, Responding with wonderment and awe, Thinking about thinking (metacognition), Taking responsible risks, Striving for accuracy, Finding humor, Questioning and posing problems, Thinking interdependently, Applying past knowledge to new situations, Remaining open to continuous learning.

Section II: Media Arts Industries and Occupations

Animation: Manipulating images or objects to appear as if they're moving. Today, much animation is done via computer-generated imagery. The technique of photographing successive drawings or positions of puppets or models to create the illusion of movement when the movie is shown as a sequence. A way of making a movie by using a series of drawings, computer graphics, or photographs of objects that are slightly different from one another and that when viewed quickly one after another create the appearance of movement.

Art Director: An art director is responsible for overseeing the creations and design of advertisement ideas, guaranteeing that a message is conveyed through

visuals, and using an artistic approach to develop and grow a brand. Art Directors typically work closely with copywriters, specialists in interactive media, and designers to do their job.

Audio Engineering: An audio engineer (also referred to as a sound engineer) is a trained professional who deals with the technical and mechanical aspects of sound: recording, manipulation, mixing and reproduction. They use technology to produce sound for film, television, video games, theater, music recording, corporate events and more.

Branding: A brand is a name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers.

Content Creation: A content creator is exactly what it sounds like; someone that creates content for your business. You can have various content creators, one for infographics, one for blog posts, one for videos, etc.

Director: A person who is in charge of making a film and tells actors how to play their parts. Directors are responsible for creatively translating the film's written script into actual images and sounds on the screen. They are ultimately responsible for a film's artistic and commercial success or failure.

Entrepreneur: A person who organizes and operates a business or businesses, taking on greater than normal financial risks in order to do so. One who organizes, manages, and assumes the risks of a business or enterprise.

Freelance: A person who is employed independently without being affiliated with or authorized by an organization.

Gig / Gig Economy: A labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs.

Graphic Design: The art or skill of combining text and pictures in advertisements, magazines, or books. The art or profession of using design elements (such as typography and images) to convey information or create an effect.

Mastering (Audio): This is the process that occurs after sound mixing. The mastering engineer ensures that all songs are at the same volume level and adds spaces and fades to the beginning and ends of songs. The industry standard is about 2 seconds between songs. Mastering engineers also place songs in the desired order, label track names, and encode the tracks with the appropriate ISRC codes. The mastering engineer's primary goal is to provide a high fidelity, high clarity, professional sound that can be enjoyed by listeners on any source.

Media Arts: According to the Washington State Arts Learning Standards, "A stu-

dent's media arts-education experience may include, but is not limited to, photography, film, animation, broadcast technology (radio, TV., and Internet), audio/video technology (TV., radio, and audio projects, social media, and Internet projects), video game design, digital art and design, emerging technologies, visual communications, Advanced Placement Studio (AP) courses, and International Baccalaureate (IB) visual arts.

Mixing: Mixing is the process that occurs after all of the individual tracks have been recorded. After a mixing engineer steps in to ensure that tracks are at appropriate volume levels, equalized (EQ'd), and have the appropriate effects which could include compression, reverb, delay, and other processors.

Motion Graphics Designer: Motion Graphics Designers put together videos that contains animations and visual effects. The role has evolved from graphic designers, with new tools allowing designers to move into video. Currently, Adobe After Effects is the industry standard but, to stand out, a lot of motion graphic designers are also proficient in video editing suites and 3-D modelling software.

Multimedia: Using more than one medium of expression or communication. Using, involving, or encompassing several media. Multimedia designers create visual effects that excite, explain, and entertain. Multimedia designers may work in the entertainment industry, creating special effects for movies, television, and video games. Or, they may work to create attention-grabbing visuals and multimedia presentations for corporations and organizations.

Portfolio: A portfolio is a compilation of materials that exemplifies your beliefs, skills, qualifications, education, training, and experience. It provides insights into your personality and work ethic.

Production (Design): Total output especially of a commodity or an industry. Production is the process of making, harvesting or creating something or the amount of something that was made.

User Experience (UX): The overall experience of a person using a product such as a website or computer application, especially in terms of how easy or pleasing it is to use. Examples of UX design include thinking about how people will interact with mobile apps through the creation, testing, and updating phase of design.

User Interface (UI): User Interface Design focuses on anticipating what users might need to do and ensuring that the interface has elements that are easy to access, understand, and use to facilitate those actions. UI brings together concepts from interaction design, visual design, and information architecture.

FX Industry: VFX involves the creations of images and sequences for film, TV, an-

imation, and games that are created independent of the set. Jobs in this industry include animators, designers, business managers, and producers. Using computer science, motion graphics, and software such as After Effects, Maya, 3DS Max, and Nuke, VFX specialists are able to create scenes that may be too complicated to replicate on set (also referred to as Special FX).

Virtual Reality: The computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment such as a helmet with a screen inside or gloves with fitted sensors. An artificial environment that is created with software and presented to the user in such a way that the user suspends belief and accepts it as a real environment. ON a computer, virtual reality is primarily experienced through two of the five senses: sight and sound.

Visual Communication: Visual communication is the conveyance of ideas and information in forms that can be seen. Visual communication in part or whole relies on eyesight.

Section 3: Technical Tools and Skills

Ableton: A software music sequencer and digital audio workstation for MacOS and MS Windows. Ableton is designed to be an instrument for live performances as well as a tool for composing, recording, arranging, mixing, and mastering.

Adobe After Effects: After Effects is a digital visual effects, motion graphics, and compositing application used primarily in the post-production process of film making and television production. After effects can also be used for keying, tracking compositing, and animation. It acts as a non-linear editor, audio editor, and media transcoder.

Adobe Audition: A digital audio workstation featuring a multi-track, non-destructive mix/edit environment and a destructive-approach waveform editing view. Audition CC is a comprehensive toolset that includes multitrack, waveform, and spectral display for creating, mixing, editing, and restoring audio content. This audio workstation is designed to accelerate video production workflows and audio finishing.

Adobe Illustrator: A vector-based graphics editing tool. It is ideal to create logos and other design work.

The industry-standard vector graphics app lets you create logos, icons, drawings, typography, and illustrations for print, web, video, and mobile.

Adobe InDesign: A desktop publishing software used to create works such as

posters, flyers, brochures, magazines, newspapers, presentations, books, and ebooks. InDesign can also publish content suitable for tablet devices.

Adobe Premiere Pro: A timeline-based video editing app primarily used and geared towards professional video editing. Users can edit, adjust color, refine audio, and more — integrated to one workflow.

Adobe Photoshop: A pixel-based program used for photo editing, enhancement, color correction, web graphics, motion graphics, and special effects among many other things. Create and enhance photographs, illustrations, and 3D artwork. Design websites and mobile apps. Edit videos, simulate real-life paintings, and more.

Adobe XD: A user experience design software application developed to support vector design, wireframing, and creating interactive click-through prototypes. Go from concept to prototype with Adobe XD, an all-in-one UX/UI solution for designing websites, mobile apps, and more.

Behringer X32: A digital mixer with everything needed to mix and record live sound and studio recordings

CSS: CSS is a language for specifying how documents are presented to users — how they are styled, laid out, etc. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments. This is referred to as the *separation of structure (or: content) from presentation*. A document is usually a text file structured using a *markup language* — HTML is the most common markup language, but you will also come across other markup languages such as SVG or XML. Presenting a document to a user means converting it into a usable form for your audience. Browsers, like Firefox, Chrome or Internet Explorer, are designed to present documents visually, for example, on a computer screen, projector or printer.

DaVinci Resolve: Combining professional offline and online editing, color correction, audio post production, and visual effects, DaVinci Resolve is a post-production software aimed at giving you all the tools needed in one software.

Digital Audio Workstations (DAWs): DAWs combine digital recording, editing, and mixing in one integrated product. Examples include Logic, Pro Tools, and Cubase.

Final Cut Pro: An Apple software aimed at editing audio, motion graphics, and

video delivery. Final Cut Pro also has the ability to do 360-degree video editing and VR headset playback.

Hindenburg: A radio editing software used by journalists and broadcasters for publishing podcasts and audio content.

HTML: HTML is the language for describing the structure of Web pages. HTML gives authors the means to:

- Publish online documents with headings, text, tables, lists, photos, etc.
- Retrieve online information via hypertext links, at the click of a button.
- Design forms for conducting transactions with remote services, for use in searching for information, making reservations, ordering products, etc.
- Include spread-sheets, video clips, sound clips, and other applications directly in their documents.

HTML (Hyper Text Markup Language) is the most basic building block of the Web. It describes and defines the *content* of a webpage along with the basic layout of the webpage. Other technologies besides HTML are generally used to describe a web page's appearance/presentation ([CSS](#)) or functionality/ behavior ([JavaScript](#)).

Midas M32: A digital mixer with everything needed to mix and record live sound and studio recordings.

Pro Tools: Used in the music, film, and TV industry, Pro Tools provides you with everything needed to compose, record, edit, and mix audio both in the studio and live.

Sketch: A digital design toolkit built to help at during the entire design process. Sketch includes tools for coding, prototyping, grids & guides, pixel precision, vector editing, and non-destructive editing.

About the Authors

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Rick Reyes is the interim racial equity & arts commission coordinator for the Office of Arts & Culture and conducted this research as a consultant. Rick recently graduate from Seattle University where he majored in Public Affairs and Philosophy. He has worked in the past at Seattle Theatre Group, the Museum of Pop Culture, and Sub Pop Records where his work focuses on communications, marketing, and research in the arts. Outside of work, Rick is an active songwriter who has performed around the Tacoma and Seattle area for the past 7 years.

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