

## **EXECUTIVE SUMMARY**

### Opportunities for work in Los Angeles County's creative occupations are not limited to people who have earned a bachelor's degree

LA County is home to a host of vibrant creative industries, producing arts and culture in both nonprofit and for-profit realms. In LA County, 355,600 workers were employed directly in creative industries in 2013. When this is combined with indirect and induced employment, the creative industries accounted for one in every seven jobs in the County. Arts education in schools from preschool through high school plays an important role in preparing young people for working in those jobs.

Another way to look at creative employment is through the lens of creative occupations, those that require some kind of creativity on the job but may be found in a variety of industries, from aerospace to construction to education to arts and entertainment. The 2014

Otis Report on the Creative Economy found

198,110 people working in 79 creative occupations in LA County.

Of those 79 creative occupations, just over half require a bachelor's degree. The rest do not. Nearly one-third of these creative occupations only require a high school diploma.

An analysis of local level data from the U.S. Department of Labor's Employment and Training Administration for those 79 occupations finds that in LA County

- Half of the occupations that do not require a bachelor's degree have median annual earnings greater than the median across all occupations in LA County;
- The top two work activities of those occupations that both do and do not require a bachelor's degree are the same: Getting Information and Thinking Creatively;

- For 20 creative occupations that do not require a bachelor's degree, more than one-third of all California employment in those jobs is in LA County; and
- On-the-job training opportunities are far more prevalent among those occupations that do not require a bachelor's degree compared to those that do.

On the whole, occupations that require a bachelor's degree do pay more than those that do not, and data from the U.S. Department of Labor projects comparatively more job openings in those occupations in LA County in the near future. Nonetheless, there are creative occupation opportunities that pay a living wage or higher for individuals who do not go directly from high school to college. These 79 creative occupations can be found in a variety of industries throughout LA County, not just the arts and entertainment.

Creative careers are for everyone, not just for those who go to college, and not just for people who work in creative industries. To ensure creative occupations are available to everyone, we recommend the following:

 Every student from kindergarten to 12th grade should have access to high quality arts education

- All students following any career technical education program of study should complete some arts courses
- Linked learning opportunities for creative occupations should be developed, and they should connect to in-school arts education
- Stakeholders in the workforce development and higher education fields should work together to develop career pathways that link creative occupations across different industries

## BACKGROUND

Home to both the entertainment industry and to one of the largest concentrations of museums in any global city,<sup>1</sup> Los Angeles County has a vibrant creative economy.

#### The **2014 Otis Report on the Creative**

**Economy** defines the creative economy as "the businesses and individuals involved in producing cultural, artistic, and design goods and services." More than ten percent of the region's total economic output comes from this work. Combined, the direct, indirect and induced employment 3 in creative industries such as entertainment and fashion account for one in every seven jobs in LA County.

In addition to its *creative industries*, LA County is home to a wide variety of *creative* occupations, jobs that require creativity but

are found not only in the creative industries. These occupations range from Floral Designers and Etchers and Engravers to Broadcast News Analysts and Marketing Managers. They may be found in industries from aerospace to construction to education to the arts and entertainment.

The **2014 Otis Report** found 198,110 people working in 79 creative occupations in LA County in 2013. <sup>4</sup> Among the major findings in the report is that half of the creative occupations in LA County require a bachelor's degree or greater. The other half do not.

<sup>1</sup> BOP Consulting (2014). World Cities Culture Report. Retrieved on March 2, 2015 from http://www.worldcitiescultureforum.com/sites/default/files/publicationWorld%20Cities%20Culture%20Report%202014%20lowres.pdf.

 $<sup>\</sup>textbf{2} \ \mathsf{LACounty Economic Development Corporation.} (2015). 2014 \ \mathsf{Otis Report on the Creative Economy}. \ \mathsf{Retrieved on March 23, 2015} \ \mathsf{from http://www.otis.edu/sites/default/files/2014\_Otis-Report-on-the-Creative-Economy-of-the-Los-Angeles-Region.pdf.}$ 

<sup>3</sup> Direct employment refers to those individuals working directly in the creative industries. Indirect employment is that generated by businesses that supply goods and services to those creative industries. Induced employment is that generated when those incomes generated by direct and indirect employment are spent in the broader economy.

<sup>4</sup> While the Otis report found 80 creative occupations, two of them (Bindery Workers and Bookbinders) have since been subsumed under a single occupation: Print Binding and Finishing Workers.

This study takes a closer look at those occupations that do not require a bachelor's degree, asking questions about what kinds of jobs they are and how they compare to jobs that do require at least a bachelor's degree. Specifically,

- How many job openings are there, and how well do they pay?
- What kinds of activities do those workers do on the job?
- What opportunities do they offer to learn on the job?
- How locally concentrated are those occupations?

This report concludes with recommendations for how the K-12 education system could be improved to increase opportunities in LA's creative occupations, in ways that benefit the LA County economy as a whole.

## FINDINGS

Data from the US Department of Labor shows some surprising similarities between creative occupations that do and do not require a bachelor's degree.

#### **OPENINGS AND EARNINGS**

In LA County, 198,110 people were employed in 79 creative occupations in 2013. Of these occupations, a little more than half (n = 41) require a bachelor's degree. The rest (n = 38) do not. A full list of the occupations can be found in Appendices A and B.

Of those occupations that do not require a bachelor's degree, 74 percent (n = 25) require only a high school diploma or less. Of the 13 remaining occupations,

- 5 require only some kind of post-secondary certificate
- 4 require an associate's degree
- 3 require less than a high school diploma
- 1 requires some college but no degree

Creative occupations that do not require a bachelor's degree are expected to employ a total of 81,830 people in LA County in 2022. A combined total of 2,212 job openings have been projected in these occupations each year from 2012 through 2022. Most of these (76 percent) will be replacing workers who leave for other occupations, retirement or other reasons. The remaining 24 percent will be new positions.

#### **DATA SOURCES**

This analysis is based on a list of the 79 creative occupations in LA County reported in the 2014 Otis Report on the Creative Economy.

Using the standard occupational code (SOC) for each occupation, data on entry level education requirements, current and projected employment, median hourly and annual wages, work experience, on-the-job training opportunities and work activities were taken from the Occupational Information Network (O\*NET), managed by the US Department of Labor's Employment and Training Administration (USDOL/ ETA). The O\*NET database contains information on standardized and occupation-specific descriptors. It is updated regularly by surveying a broad range of workers from each occupation.

Data on the share of California employment found in LA County was taken from the Otis report.

By comparison, there are many more people employed in creative occupations that do require a bachelor's degree. A total of 191,240 people are expected to be working in those occupations by 2022. USDOL/ETA projects 5,558 openings each year between 2012 and 2022, of which 66 percent will be replacements.

Research has long shown that greater education leads to higher earnings, 5 and this is as true in creative occupations as elsewhere. Median annual wages in LA County 6 for jobs requiring a bachelor's degree (\$73,092) are higher than for those that do not (\$43,332). However, a closer look at the range of earnings shows that some non-bachelor's occupations have rates of pay

comparable to what a person might earn in an occupation that does require a bachelor's degree. As Table 1 shows, median annual wages for those positions that do not require a bachelor's degree range from a low of \$21,826 to a high of \$84,270. By comparison, median annual wages for those occupations that do require a bachelor's degree range from a low of \$37,929 to a high of \$134,326.

These figures can be compared to the median annual wage across all occupations in LA County of \$37,810. All creative occupations that require a bachelor's degree pay more than the countywide median. Half the creative occupations (n = 19)that do not require a bachelor's degree also pay greater than the countywide median.

**TABLE 1:** Projected employment and current wages

	REQUIRE A BACHELOR'S DEGREE OR MORE	REQUIRE LESS THAN A BACHELOR'S DEGREE
Projected employment, 2022	191,240	81,830
Overall median annual wages	\$73,092	\$43,332
Highest median annual wage occupation	Advertising & Promotions Managers	Makeup Artists, Theatrical & Performing
Highest median annual wage	\$134,326	\$84,270
Lowest median annual wage occupation	Reporters & Correspondents	Motion Picture Projectionists
Lowest median annual wage	\$37,929	\$21,826

 $<sup>\</sup>textbf{5} \ \ \text{See, for example, data collected and analyzed by the National Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp?id=77) and the Pew Research Center for Education Statistics (http://nces.ed.gov/fastfacts/display.asp) and the Pew Research Center for Education Statistics (http:/$ (http://www.pewsocialtrends.org/2014/02/11/the-rising-cost-of-not-going-to-college/).

<sup>6</sup> Where local-level wage data was not available, national data was used instead, if available.

#### **WORK ACTIVITIES**

Work activities in occupations that do require a bachelor's degree are similar to those that do not. The taxonomy established by the USDOL/ETA identifies key work activities or "general types of behaviors" associated with each occupation in the SOC. The three most important work activities were selected for each of the creative occupations on these lists. Those were combined and calculated for the occupations that require at least a bachelor's degree, and for those that require less than a bachelor's degree. As Table 2 shows, the two most common work activities were the same for both types of occupations. Only the third most common work activities differ.

**TABLE 2:** Top three work activities

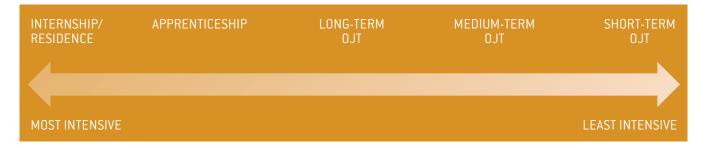
RANK	REQUIRE A BACHELOR'S DEGREE OR MORE	REQUIRE LESS THAN A BACHELOR'S DEGREE
1	Getting Information	Getting Information
2	Thinking Creatively	Thinking Creatively
3	Interacting With Computers	Handling and Moving Objects

#### ON-THE-JOB TRAINING

On-the-job training (OJT) is an important facet of employment opportunity. All employees learn some of their responsibilities on the job. However, some occupations are more intentionally learned through OJT, while others rely more on formal education or other training outside of work. OJT can be categorized by intensity as shown in Figure 1.

Among creative industry jobs, those that do not require a bachelor's degree provide many more opportunities to learn on the job compared to those that do. Among the creative occupations that do not require a bachelor's degree, 87 percent (n = 33) utilize OJT as a way of training workers. Nearly a third of them are learned through short-term OJT. Jobs that require a bachelor's degree are almost the opposite, with only 15 percent of them (n = 6) utilizing any kind of OJT.

FIGURE 1: On-the-job training



#### LOCAL CONCENTRATION

Another factor to consider is the degree to which an occupation is locally concentrated. The more concentrated an occupation is in a local region, the more important that occupation is to the local economy. It also suggests it is an occupation that gives the local economy an economic advantage. Nearly 43 percent of all California employment in those creative occupations that do not require a bachelor's degree is found in LA County, compared to 40 percent among those creative occupations that do require a bachelor's degree. In other words, those occupations that do not require a bachelor's

degree are more or less equally concentrated locally as those that do.

Table 3 shows the top five most highly concentrated occupations among those that both do and do not require a bachelor's degree. For each occupation listed, the share of all California employment that is found in LA County is reported.

For the nearly 61 percent (n = 20) of creative occupations analyzed in this report that do not require a bachelor's degree, more than one-third of all California employment is in LA County. This high local concentration also is true for half (n = 20) the jobs that do require a college degree.

**TABLE 3:** Top five most locally-concentrated jobs Percent shown is the share of all California employment that is found in LA County for that occupation

RANK	REQUIRE A BACHELOR'S DEGREE OR MORE	REQUIRE LESS THAN A BACHELOR'S DEGREE
1	Agents and Business Managers of Artists, Performers, and Athletes (88.9%)	Makeup Artists, Theatrical and Performing (87.8%)
2	Film and Video Editors (85.8%)	Fabric and Apparel Patternmakers (85.6%)
3	Producers and Directors (80.7%)	Media and Communication Workers, All Other (82.0%) <sup>7</sup>
4	Media and Communication Equipment Workers, All Other (79.0%)	Sound Engineering Technicians (71.8%)
5	Camera Operators, Television, Video, and Motion Picture (77.8%)	Fashion Designers (68.5%)

<sup>7</sup> The 2010 SOC system classifies all workers into one of 840 detailed occupations, with 461 broad occupations, 97 minor groups and 23 major groups. "All Other" refers to residual groups of workers below the major group level. More information can be found in the SOC User Guide at http://www.bls.gov/soc/socguide.htm.

# DISCUSSION AND RECOMMENDATIONS

### Arts education in K-12 schools plays an important role in preparing young people to work in creative occupations in many industries

While wages are higher and more job openings are expected in those that do require a bachelor's degree, people who go directly into the workforce after high school can find work for living wages and better in many creative occupations. The most common job activities for those workers will be very similar to occupations that require a bachelor's degree, and they will have greater opportunity to learn on the job.

While the advantages of earning a college degree are clear, the reality is that not every high school graduate in LA County will go to college immediately. While there are approximately 1.6 million students in K-12 education in LA County, there are only half that many (n = 864,498) in college or graduate school. 8 Pathways to and

through college are more complex today than ever before. Across the US, 72 percent of students enrolled in undergraduate education are working; 20 percent of all undergraduate students are working full-time, year-round. 9 Even for those students who do begin college, earning a bachelor's degree is not certain. Fewer than 60 percent of students entering a four-year college will complete their degree within six years. 10 Emerging research is beginning to recommend a model of lifelong learning to replace one where formal education ends in young adulthood. 11

With these creative occupations so highly concentrated in LA County, efforts to prepare young people to enter those occupations should begin in the K-12 system. This will not only help

<sup>8</sup> BU. S. Census Bureau. (2013). Selected Social Characteristics in the United States: Los Angeles County, CA. Retrieved February 19, 2015, from  $http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\_13\_1YR\_DP02\&prodType=table$ 

<sup>9</sup> Davis, J. (October 2012). School Enrollment and Work Status: 2011. Retrieved February 19, 2015, from http://www.census.gov/prod/2013pubs/acsbr11-14.pdf

<sup>10</sup> National Center for Education Statistics. (2012). Table 376: Percentage of first-time full-time bachelor's degree-seeking students at 4-year institutions who completed a  $bachelor's \, degree, by \, race/ethnicity, time \, to \, completion, sex, and \, control \, of institution: \\ Selected \, cohort \, entry \, years, 1996 \, through \, 2005. \\ Retrieved \, February \, 27, 2015. \\ Retrieved \, Retrieved \, 27, 2015. \\ Re$ from http://nces.ed.gov/programs/digest/d12/tables/dt12\_376.asp

<sup>11</sup> Pusser, B., et. al. (2007). Returning to Learning: Adults' Success in College is Key to America's Future. Retrieved February 27, 2015, from https://folio.iupui.edu/bitstream/handle/10244/270/ReturntolearningApril2007.pdf

individual workers but also will benefit the local economy more broadly. Moreover, this is an issue of social justice and equity. In LA County, only about a third of African American or Latino students graduate from high school having completed the courses required for entry into the University of California or California State University systems. <sup>12</sup>

If we are to prepare all students equally for the many creative occupations available in LA County, then we must ensure that **every student from kindergarten to 12th grade has access to high quality arts education.** The knowledge and skills they gain will prepare them for jobs not only in the creative industries, but for creative occupations that are found in many different industries. This is true for every student, whether or not they continue to college immediately after high school.

The career technical education (CTE) system can help improve creative career opportunities for LA County students. Programs of study within California's CTE framework are organized around industry clusters, and the Arts, Media, and Entertainment Industry Sector as well as the Fashion and Interior Design Industry Sector are seen as preparing students for work in creative industries. However, creative occupations may be found in many other industries. Therefore we recommend that all students following any

**CTE program of study complete some arts courses,** which can help them gain skills needed for the creative occupations within that industry.

Development of work-based **linked learning opportunities in creative occupations** can serve as another tool to improve career pathways for a broad base of LA County students. This should include workplaces in both creative and other industries where creative occupations are found. These types of opportunities could include job shadowing, internships, school-based enterprises and cooperative education. These linked learning activities should connect with arts education experiences in the classroom.

rinally, the findings in this study suggest areas for further exploration by workforce development and higher education experts. Career pathways could be developed to help move people from lower-paying creative occupations into higher-paying ones. Partnerships between employers, educational institutions and unions could be established that allow workers in non-bachelor's creative occupations to return to school and earn a bachelor's degree while still on the job.

Giving high school graduates who choose to enter the workforce immediately the tools they need to succeed in creative occupations will benefit those workers, the companies they work for, and the economy of LA County as a whole.

<sup>12</sup> Ed-Data. (2013). Graduates with UC/CSU Required Courses by Race/Ethnicity: Los Angeles County, 2012-13. Retrieved February 19, 2015, from https://www.ed-data.k12.ca.us/App\_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/\_layouts/EdDataClassic/Accountability/PerformanceReports.asp?report Number=1&fyr=1213&county=19&district=&school=&level=05&tab=3

Creative occupations in LA County that do not require a bachelor's degree

51.8% 22.0% 65.9% 25.5% 17.6% 21.0% 19.2% 38.8% 19.5% 57.8% 68.5% N A None MTOJT LTOJT LTOJT None LTOJI LTOJT LTOJT None MTOJT LTOJI LTOJI \$56,788 \$59,054 \$66,207 \$28,348 \$42,138 \$33,194 ∀ X  $\stackrel{\mathsf{N}}{\sim}$ ∀ X  $\stackrel{\mathsf{N}}{\sim}$ \$64,831 \$56,221 \$22.15 \$20.25 \$31.17 \$28.39 \$31.83 \$13.63 \$40.82 \$27.03 \$15.95 \$27.31 Ŋ ∀ \$13.71 OPENINGS THROUGH 2022 36 \_ 9 230 127 133 183 9 70 ∀ X 48 2 2,200 4,580 5,430 2,070 5,540 2,650 1,330 760 240 490 620 × 2,670 2,020 4,270 4,440 810 220 4,900 730 1,870 1,190 × 390 HSDiplomaor Equivalent Some college, no Non-degree Associate Degree Post Secondary/ Award **HSDiplomaor** Equivalent HSDiplomaor Equivalent **HSDiplomaor** Equivalent **HSDiplomaor HSDiplomaor HSDiplomaor** HSDiplomaor Equivalent **HSDiplomaor** Equivalent Equivalent Equivalent Equivalent 17-3011 27-1023 27-2011 27-2032 27-1012 27-1013 27-1019 27-2042 25-4031 27-1022 27-1026 27-2031 SOC Art, Design, Entertainment and Architecture and Engineering **Architectural and Civil Drafters** Fine Artists, Including Painters, Education, Training Library Artists and Related Workers, Merchandise Displayers and Sculptors and Illustrators Musicians and Singers Media Occupations Library Technicians Window Trimmers Fashion Designers Choreographers Floral designers Occupations Operations **Craft Artists** All Other Dancers Actors

APPENDIX A:

APPENDIX A: (continued)

L P	Ú	ENTRY LEVEL	AVERAGE EMPLOYMENT	PLOYMENT	PROJECTED ANNUAL JOB	WAGES	SES	ON-THE-JOB	LA COUNTY
JUB 111E	SUL	EDUCATION	2012	2022	OPENINGS THROUGH 2022	MEDIAN HOURLY	MEDIAN	TRAINING	SHAKE UP CA EMPLOYMENT
Public Address System and other Announcers	27-3012	HS Diplomaor Equivalent	870	950	26	A/N	N/A	STOJT	51.1%
Media and Communication Workers, All Other	27-3099	HS Diplomaor Equivalent	12,490	13,380	260	\$23.68	\$49,250	STOJT	82.0%
Audio and Video Equipment Technicians	27-4011	Post Secondary/ Non-degree Award	5,190	5,840	160	\$24.10	\$50,130	STOJT	49.8%
Broadcast Technicians	27-4012	Associate Degree	3,230	3,190	58	\$20.83	\$43,332	STOJT	62.6%
Radio Operators	27-4013	HSDiplomaor Equivalent	N/A	N/A	N/A	\$21.45	\$44,600	STOJT	N/A
Sound Engineering Technicians	27-4014	Post Secondary/ Non-degree Award	3,080	3,150	63	\$35.53	\$73,916	STOJT	71.8%
Photographers	27-4021	HSDiplomaor Equivalent	5,070	5,150	61	\$24.77	\$51,527	LTOJT	37.9%
Personal Care and Service Occupations									
Motion Picture Projectionists	39-3021	Lessthan High School	250	200	10	\$10.50	\$21,826	STOJT	28.7%
Costume attendants	39-3092	HSDiplomaor Equivalent	820	920	51	\$25.14	\$52,297	STOJT	52.4%
Makeup Artists, Theatrical and Performing	39-5091	Post Secondary/ Non-degree Award	1,030	1,120	17	\$40.52	\$84,270	None	87.8%
Sales and Related Occupations									
Advertising Sales Agents	41-3011	HSDiplomaor Equivalent	6,060	6,160	196	\$26.42	\$54,948	TLOTM	34.9%
Office and Administrative Support Occupations									
Library Assistants, Clerical	43-4121	HSDiplomaor Equivalent	2,690	3,100	158	\$11.48	\$23,897	STOJT	28.4%
Desktop Publishers	43-9031	Associate Degree	350	320	9	\$24.28	\$50,517	STOJT	28.0%

APPENDIX A: (continued)

		- NO FIND	AVERAGE EMPLOYMENT	чсоумент	PROJECTED	WAGES	SES	A TITLE	LA COUNTY
JOBTITLE	30S	EDUCATION	2012	2022	OPENINGS OPENINGS THROUGH 2022	MEDIAN HOURLY	MEDIAN ANNUAL	TRAINING	SHARE OF CA EMPLOYMENT
Installation, Maintenance and Repair Occupations									
Electronic Home Entertainment Equip. Installers and Repairers	49-2097	Post Secondary/ Non-degree Award	460	280	28	\$17.33	\$36,050	None	22.1%
Camera and Photographic Equipment Repairers	49-9061	Associate Degree	N/A	A/N	A/N	\$21.54	\$44,800	LTOJT	A/N
Musical Instrument Repairers and Tuners	49-9063	HS Diploma or Equivalent	240	250	00	\$14.27	\$29,679	APP	40.4%
Watch Repairers	49-9064	HS Diploma or Equivalent	A/N	A/N	A/N	\$17.05	\$35,500	LTOJT	A/N
Production Occupations									
Print Binding and Finishing Workers	51-5113	HS Diploma or Equivalent	1,990	1,730	35	\$12.87	\$26,773	STOJT	N/A
Sewers, Hand	51-6051	Less than High School	640	929	7	\$11.81	\$24,578	MTOJT	38.8%
Tailors, Dressmakers, and Custom Sewers	51-6052	Less than High School	2,860	2,940	39	\$13.37	\$27,800	MTOJT	42.0%
Fabric and Apparel Patternmakers	51-6092	HS Diploma or Equivalent	1,680	1,390	27	\$25.74	\$53,536	MTOJT	85.6%
Cabinetmakers and Bench Carpenters	51-7011	HS Diploma or Equivalent	1,890	1,540	15	\$18.54	\$38,564	MTOJT	22.3%
Jewelers and Precious Stone and Metal Workers	51-9071	HS Diploma or Equivalent	1,510	1,180	31	\$15.31	\$31,835	LTOJT	39.4%
Painting, Coatingand Decorating Workers	51-9123	HS Diploma or Equivalent	520	390	10	\$13.25	\$27,556	MTOJT	29.9%
Photographic Process Workers	1516-151	HS Diploma or Equivalent	1,560	1,550	46	\$16.95	\$35,261	TLOTS	35.4%
Etchers and Engravers	51-9194	HS Diploma or Equivalent	220	240	7	\$15.71	\$32,689	TLOTM	26.9%

Creative occupations in LA County that do require a bachelor's degree

APPENDIX B:

39.8% 24.6% 30.5% 88.9% 16.4% 16.5% 31.6% 9.1% ₹ Z 26.9% None None None None None None None K None K MEDIAN ANNUAL \$99,856 \$66,600 \$87,787 \$77,487 \$134,326 \$130,165 \$95,374 \$82,333 \$90,427 \$116,327 \$62.58 \$43.48 \$55.93 \$39.59 MEDIAN HOURLY \$64.58 \$37.25 ₹ Z \$45.85 \$48.01 ₹ Z PROJECTED ANNUAL JOB OPENINGS THROUGH 2022 246 417 171 12 ¥  $\sim$ 71 287 73 518 2,060 8,610 2,300 6,470 18,800 15,380 4,900 340 ₹ Z 180 4,180 170 1,950 7,300 5,160 15,620 12,850 ₹ Z 1,990 280 Degree Bachelor's Degree ENTRY LEVEL EDUCATION Bachelor's Degree Doctoral/Professional Doctoral/Professional 15-1133 15-1132 17-1012 25-1031 25-1061 11-2011 11-2021 17-1011 13-1011 11-2031 Public Relations and Fundraising Architecture and Engineering Agents and Business Managers Anthropology and Archeology Software Developers, System Architects, Except Landscape Management Occupations Advertising and Promotions Computer Mathematical Operations Occupation Education, Training and Teachers, Postsecondary **Business and Financial** Architecture Teachers, Landscape Architects Software Developers, Marketing Managers Library Operations Postsecondary Occupations Occupations of Artists, etc. Applications Managers Managers and Naval Software

APPENDIX B: (continued)

		FNTRYLEVEL	AVERAGE EMPLOYMENT	IPLOYMENT	PROJECTED ANNUAL JOB	WAGES	ES	ON-THE-JOB	LA COUNTY
JOB TITLE	SOC	EDUCATION	2012	2022	OPENINGS THROUGH 2022	MEDIAN HOURLY	MEDIAN ANNUAL	TRAINING	SHARE OF CA EMPLOYMENT
Area, Ethnic and Cultural Studies Teachers, Postsecondary	25-1062	Doctoral/Professional Degree	280	330	6	N/A	\$76,041	None	31.5%
Library Science Teachers, Post-secondary	25-1082	Doctora/Professional Degree	A/N	∀/Z	A/N	∀/N	\$96,000	None	20.8%
Art, Drama and Music Teachers, Postsecondary	25-1121	Doctoral/Professional Degree	4,210	4,770	119	A/N	\$71,144	None	32.2%
Communications Teachers, Postsecondary	25-1122	Doctoral/Professional Degree	1,140	1,190	22	N/A	\$79,713	None	31.4%
English Language and Literature Teachers, Postsecondary	25-1123	Doctoral/Professional Degree	2,080	2,140	38	N/A	\$73,997	None	24.8%
Foreign Language and Literature Teachers, Postsecondary	25-1124	Doctoral/Professional Degree	1,380	1,570	40	N/A	\$67,320	None	35.0%
History Teachers, Postsecondary	25-1125	Doctora/Professional Degree	440	480		∀/N	\$75,788	None	21.8%
Archivists	25-4011	Masters Degree	280	420	20	\$21.70	\$45,143	None	52.8%
Curators	25-4012	Masters Degree	310	380	15	\$31.79	\$66,116	None	31.9%
Museum Technicians and Conservators	25-4013	Bachelor's Degree	450	280	23	\$23.51	\$48,896	None	37.4%
Librarians	25-4021	Masters Degree	2,670	2,920	98	\$34.70	\$72,186	None	27.5%
Audio-Visual and Multimedia Collections Specialists	25-9011	Bachelor's Degree	290	280	2	\$22.63	\$47,065	None	22.6%
Art, Design, Entertainment and Media Occupations									
Art Directors	27-1011	Bachelor's Degree	089'9	6,910	181	\$50.44	\$104,915	None	50.3%
Multimedia Artists and Animators	27-1014	Bachelor's Degree	14,760	15,940	469	\$41.00	\$85,278	TLOJT	64.7%

APPENDIX B: (continued)

	(	ENTRY LEVEL	AVERAGE EMPLOYMENT	PLOYMENT	PROJECTED ANNUAL JOB	WAGES	ES	ON-THE-JOB	LA COUNTY
JOB TITLE	SOC	EDUCATION	2012	2022	OPENINGS THROUGH 2022	MEDIAN HOURLY	MEDIAN	TRAINING	SHARE OF CA EMPLOYMENT
Commercial and Industrial Designers	27-1021	Bachelor's Degree	1,850	1,910	55	\$25.69	\$53,429	None	39.1%
Graphic Designers	27-1024	Bachelor's Degree	12,130	12,990	407	\$25.51	\$53,054	None	36.2%
Interior Designers	27-1025	Bachelor's Degree	2,380	2,690	95	\$27.61	\$57,425	None	29.4%
Set and Exhibit Designers	27-1027	Bachelor's Degree	1,470	1,610	53	\$26.83	\$55,816	None	20.0%
Designers, All Other	27-1029	Bachelor's Degree	1,390	1,450	43	\$19.34	\$40,246	None	71.0%
Producers and Directors	27-2012	Bachelor's Degree	22,950	24,800	961	\$50.03	\$104,065	None	80.7%
Music Directors and Composers	27-2041	Bachelor's Degree	710	740	22	\$30.92	\$64,305	None	14.9%
Radio and Television Announcers	27-3011	Bachelor's Degree	1,570	1,560	32	\$18.34	\$38,152	None	44.4%
Broadcast News Analysts	27-3021	Bachelor's Degree	380	340	13	N/A	N/A	None	54.0%
Reporters and Correspondents	27-3022	Bachelor's Degree	1,580	1,710	29	\$18.24	\$37,929	None	31.2%
Public Relations Specialists	27-3031	Bachelor's Degree	7,730	8,400	172	\$31.05	\$64,588	None	34.5%
Editors	27-3041	Bachelor's Degree	4,090	4,440	134	\$30.37	\$63,172	None	34.0%
Technical Writers	27-3042	Bachelor's Degree	1,360	1,600	99	\$36.25	\$75,393	STOJT	20.3%
Writers and Authors	27-3043	Bachelor's Degree	12,540	13,300	347	\$46.60	\$96,932	MTOJT	%0.09
Camera Operators, Television, Video, and Motion Picture	27-4031	Bachelor's Degree	2,810	3,120	53	\$23.98	\$49,867	None	77.8%

APPENDIX B: (continued)

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JUB IIILE	SUL	EDUCATION	2012	2022	THROUGH 2022	MEDIAN HOURLY	MEDIAN ANNUAL	TRAINING	SHAKE OF CA EMPLOYMENT
Filmand Video Editors	27-4032	Bachelor's Degree	8,500	8,980	113	\$41.73	\$86,805	None	85.8%
Media and Communication Equipment Workers, All Other	27-4099	Bachelor's Degree	4,270	4,650	92	\$32.71	\$68,028	STOJT	79.0%



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Executive Director

Researched and prepared by

Bronwyn Mauldin, Research and Evaluation Manager,

LA County Arts Commission

Designed by Picnic Design

Cover photo by Gennia Cui

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June Bayha *WestEd*