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Recruitment, Retention, and Pathways to Employment in the Printing Industry

Introduction

For many years in the printing industry, another way to say “intractable problem” has been “recruitment and retention.” No management issue confronts printing companies more stubbornly than the perennial difficulty of hiring qualified people and keeping them in their jobs.

PIA member and esteemed printing industry journalist and reporter, Patrick Henry, put together this report, based on interviews with printers, educators, and other experts who address the challenges of recruitment and retention every day. It offers their insights and recommendations as a guide for other printers dealing with workforce challenges of their own. The solutions it describes are presented as a cross-section of resources and strategies available to printing companies with open jobs to fill.

We thank our sources for their detailed and candid answers to our questions. We welcome commentary from readers of this report.

Overview: the Reality, and the Response

Workforce shrinkage in the printing industry is a fact, and the problems it causes are more complex than they may appear at first glance. But, printers are looking realistically at the situation and responding with practical solutions.

An ‘Unheard of’ Shortage of Talent

To get a clearer picture of the labor pressures that printers are facing, a coalition of 15 regional printing trade associations took part in a survey that had two aims: gauging the impact of unfilled jobs on the industry; and identifying ways in which companies can address the problems that gaps in employment cause them.

The October 2021 report, “Workforce Shortages: Its Effects and Effective Related Practices,” is one of a series of Printing Industry Performance & Insights (PIPI) reports sponsored by the coalition. It was prepared by Dr. Ralph Williams Jr. and Dr. Tim Moake of Middle Tennessee State University (MTSU), where both are professors of management in the Jones College of Business.

The findings were plain. Nearly 70% of survey respondents said that labor shortages had affected their businesses. At their companies, job turnover from all causes averaged 14%. More tellingly, employers indicated that on average, they were unable to fill 36% of their open positions for more than a year.

Williams served as the president of three printing companies before he entered academia. He says that during his career in the private sector, “we never had that kind of problem” with employment. Times clearly have changed since then. He says, for example, that a friend of his who operates a 15-employee company has experienced 50% turnover recently. “That’s unheard of for them,” Williams comments.

Experience Necessary

But not for other printers who are feeling the same pinch in their own ways. Thomas J. Majerski, president of BNP Empowered Printing in Buffalo, NY, oversees a heatset web offset operation that specializes in high-speed, long-run print manufacturing. In such a business, Majerski says, “the lack of printing experience is always a problem. One of the biggest challenges we have is trying to find people with that type of experience.”

“Where we’re finding the most difficulty is at that top end: actual pressmen, and men in charge. That’s really where we need qualified people, and it takes years to develop and get to that level.”

The pool of available talent is “certainly not what it used to be,” Majerski acknowledges. “As the number of printing plants decline, that’s always a huge challenge.” Finding people willing to work in a form of manufacturing like printing makes the challenge that much tougher.

“We don’t live in a society anymore where people really want to roll up their sleeves,” Majerski observes. “It’s a dirty environment. It’s a loud environment. The hours are long, and it’s physically laborious work.”

Asked if there are positions open at BNP now, Majerski answers, “Plenty. We’re desperate for people.”

In Tinton Falls, NJ, Bill Duerr is president of Hatteras, a three-shift commercial printing business that is expanding into packaging. He, too, is running into obstacles when it comes to filling openings for skilled jobs.

“We’re not geographically close to our competition, so it’s not like there’s a talent pool that we can pull from,” Duerr notes. That means doubling down on “home grown

training” for folding, gluing, die cutting, and related tasks. “Machine operators that have the skill to set up a complex job – that’s a tough position to fill right now, especially on second or third shifts. It’s really hard for us to find those people.”

Can’t Locate Candidates Locally

The perennial difficulty of finding the right candidates is what prompted the H&H Group of Lancaster, PA, to join with others in launching a formal apprenticeship program to create the skill sets the company needs (described in detail below). Deb Williams, HR and finance manager, says that building them for the signage portion of H&H’s business was especially important, given the shortage of that kind of talent in the company’s home territory.

Nate Heisey, operations manager at H&H, says that besides wanting to hire machine operators for its signage division, the company also has openings for installers: “someone who is comfortable getting up on a ladder and putting a mural on a wall, or hanging a sign from a ceiling, or digging a hole in the ground to install a post-and-panel sign.” It can be a struggle to find people who are able and willing to put their backs into that kind of work, Heisey acknowledges.

Williams points out that a shortage of hands-on labor isn’t just an issue for printers. She says that in the normal course of its business, H&H encounters other manufacturers and service companies that are in the same boat. “We hear it over and over again. They’re just struggling to find people who aren’t afraid of a hard day’s work.”

Not Only the Skilled

This exposes the mistake of thinking that only skilled workers are the ones in short supply. The degree of difficulty an employer faces in hiring “depends on the position you are trying to hire for,” says Becky Almeter, president of Hodgins Engraving in Batavia, NY. “I think it’s easier to find folks with skilled experience such as HR, accounting, customer service, prepress. It’s harder to find people to fill less skilled, manual labor jobs and in my opinion, it’s a social problem across many industries, not just printing.”

At the root of the problem, according to Almeter, are attitudinal changes that make it difficult for a business like hers to engage new people when so many potential hires, especially younger ones, are insisting on rapid advancement and higher wages “right out of the gate.”

In her opinion, the “work ethic mindset” and the sense of loyalty shared by the veteran employees of Hodgins Engraving isn’t prevalent among younger people who only want to leapfrog to “the next best thing” in their careers, wherever they can find it.

Brian Regan is the founder and president of the Semper Group, a provider of staffing solutions to the graphic communications industry since 1995. He sees a dynamic similar to the one Almeter describes in what he calls “the great change” that the U.S. labor force has undergone recently: large numbers of workers pursuing their own dreams,

becoming self-employed, putting family obligations ahead of their jobs, or flocking to the gig economy for the greater flexibility they believe it offers.

Meanwhile, the printing industry's existing work force continues to shrink as it ages. This means that whatever employable talent there is will be hard for printers to win over, according to Regan. "You've got the rest of the world desperately fighting for those same workers," he says, noting that other industries are pitching their attractiveness in ways that the printing industry may not be able to match.

Dollar Definition of 'Entry Level'

Jobs in manufacturing industries like printing are hard to fill across the board, but Regan sees some of the stiffest competition for workers taking place in the \$15 to \$20 hourly pay range. "In today's terms, that's entry-level," he says. People will not work for less than that, or if they will, they "won't care" about keeping the jobs or putting serious effort into them.

Printers understand the competition they face for labor of all types, and they've seen that the traditional ways of recruiting people – classified advertising, commercial trade schools, poaching from other employers – either no longer exist or aren't adequate to the present task. So, they are turning to more creative ways of closing their employment gaps and leveraging the talent they have.

Sometimes, good solutions to the talent shortfall can come from sources that printers haven't previously investigated. Facing difficulty in getting the people it needed from the local labor pool, BNP worked with the International Institute of Buffalo, a group that advocates for immigrants and refugees, to find talent among the city's foreign-born community.

From Myanmar to The Queen City

The effort paid off. "We have some Burmese employees on our press floor," says Majerski. "It's a close-knit community. We've hired friends and family from the people we initially hired." At one point, the company employed as many as a dozen people who hailed from Myanmar. Majerski adds that BNP has a partnership with another Buffalo organization, Journey's End Refugee Services, aimed at job placement for the area's non-native residents.

Duerr says that Hatteras has recalibrated its thinking about hiring for "front office" positions such as sales, customer service, production planning, and estimating. "We've tried to focus less on skill set, and more on culture," he explains, citing a positive attitude, a strong work ethic, and a desire for continuous personal improvement as the most desirable attributes for front-office candidates to have.

"We feel that if we're just going to look for somebody just like what we've got in printing industry experience, we are limiting ourselves to a very small talent pool," Duerr says. "So we start more with cultural fit. If they have a printing skill set, great; if not, we'll teach them what they need to know."

Hatteras has a four- to six-week orientation program for new hires, and it extensively cross-trains its production employees to broaden their skills and increase their value to the company. Duerr also introduced an incentive payment program that rewards both new hires and the employees who referred them after the new hires have completed six months in their jobs.

ROI from Money Well Spent

The referring and signing bonuses “definitely helped us attract some new talent,” Duerr says. “Yes, it cost us money, but we grew our labor force by about 50 people doing that. We paid for it, but if we keep those people for several years, it will pay for itself.”

Compensation in all the forms it can take is a key ingredient of hiring and retention in any industry. Regan notes, however, that because printers typically don’t have profit margins as high as companies in the industries they are vying with for talent, “trying to compete on pay and wages alone is a challenging thing for them. It’s oftentimes not even feasible.”

Regan says that Semper has been advising printers “for years” that they need to pay more, and he sees evidence that lately, the message has started to resonate. He advises those unable to increase their pay scales to use non-monetary compensation – for example, better healthcare benefits, extra time off, more flexible work schedules – as alternatives for rewarding their valued employees.

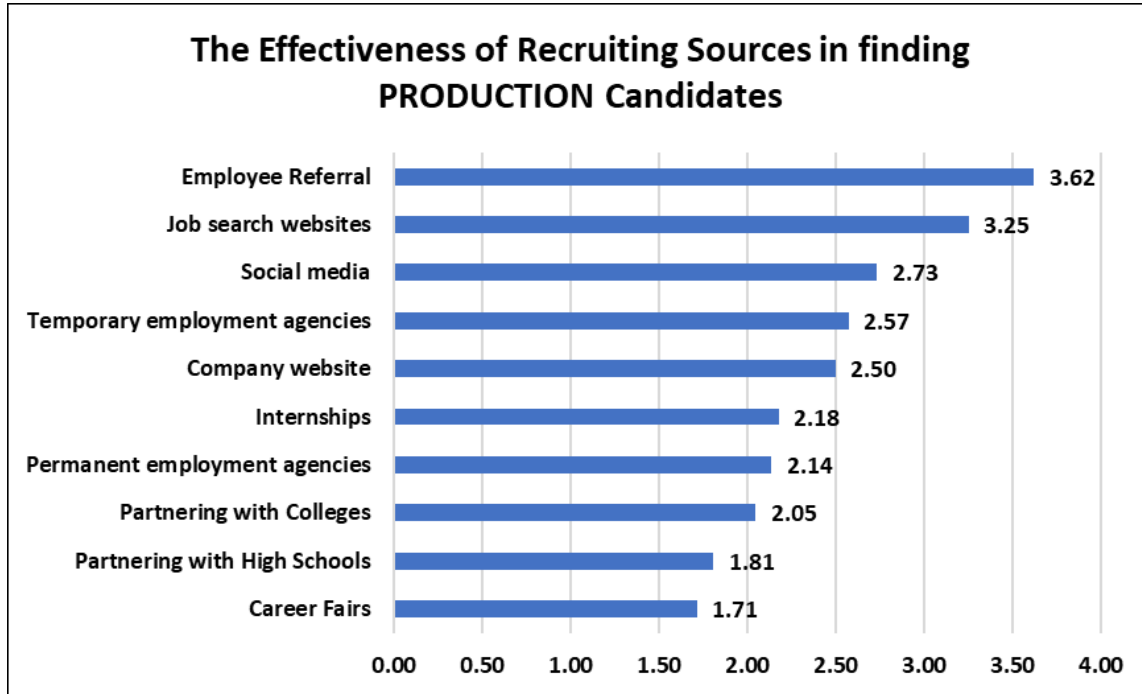
Age-Accommodating Work Spaces

Given the continuous difficulty of replacing a greying work force, says Regan, the industry also ought to think about changing its manufacturing environments in ways that enable older workers to stay on the job longer. Automated systems for cutting, jogging, and stacking in the bindery illustrate the kinds of labor- and stress-reducing solutions that printers and OEMs can deploy throughout the plant to assist older employees, Regan believes.

Each of the foregoing examples shows what can happen when printers apply basic principles of good management to solving their problems of recruitment and retention. In fact, one of the key findings of the PIPI Workforce Shortages study was that higher-performing printing firms tend to have less employee turnover than weaker performers. Part of the explanation, according to Moake, is simply that “higher-performing firms are more efficient” across the board.

“The focus on continuous improvement has been such a push for the past couple of decades,” he says. “For companies that are high-performing, continuous improvement is trickling over into the way they treat their employees – the way they manage their employees.” Workers tend to repay companies for good management with their loyalty, Moake adds.

Another common-sense finding is that using more recruiting sources – the report identifies 10 of them – brings in more qualified candidates. The survey data also suggest that higher-performing firms get their better results by applying just a few more tools for making hiring decisions than lower-performing firms (see charts on page 00).



1-to-5 scale: 1 = Not effective at all; 3 = Neutral; 5 = Very effective.

The use of Hiring Decision Tools - Production Employees		
1	Interview candidate to measure interpersonal skills, personality traits, communication skills	4.57
2	Job knowledge interview to assess job specific knowledge and expertise	4.54
3	Recommendation letters from previous managers, professors, or others	3.30
4	Personal statement, writing sample, resume, or cover letter	3.30
5	Group interview with multiple candidates to measure problem-solving and discussion skills	2.76
6	Practical test to assess actual job ability regarding tasks similar to work sample (activities that are designed to measure different types of jobs, such as hanging plates on a press, operating a cutter or folder, preflighting files, operating a digital press)	2.49
7	"Cognitive ability test to assess basic mental abilities regarding reasoning and comprehension (for example, IQ test)"	2.05
8	Written test to measure personality traits (Myers Briggs MBTI, Predictive Index, Disc, StrengthFinders, etc.)	1.86

9	Job knowledge written test (multiple choice) to assess job specific knowledge and expertise	1.73
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1-to-5 scale: 1 = Not at all; 3 = Sometimes use; 5 = Always use. (Source of both charts: "Workforce Shortages: Its Effects and Effective Related Practices," a Printing Industry Performance & Insights [PIPI] report)

These resources are available to every printer, but they have to be used judiciously. "Companies still need to be very careful and very strategic, because those recruiting dollars are very precious," Moake advises. "You don't want to just throw money at anything and everything that everyone else is doing." Something to bear in mind here is how technology is changing the way recruiting occurs: for example, through applicant tracking software systems that let employers maximize the efficiency of the hiring process.

In all cases, Ralph Williams emphasizes, "you have to strategically decide what you are going to use both in recruiting and hiring to fit the position that you're seeking to fill. One basket of those tools doesn't fit every position you have."

Solutions: Printing Apprenticeships

Benjamin Franklin, patron saint of printing, learned the trade as an apprentice in his brother James's shop in Boston and later became the official printer of Pennsylvania. Today, some of his spiritual heirs in the Keystone State are reviving this time-honored method of developing new talent for industries of all kinds.

The Pennsylvania Project

Apprenticeships.gov, an online resource of the U.S. Department of Labor (DOL), defines apprenticeship as "an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential."

The DOL, which in 2020 projected it would enroll one million new apprentices by September 30, 2021, says that 92% of those who complete an apprenticeship retain employment with an average annual salary of \$72,000. That message of opportunity rang true to a group of Pennsylvania printers and educators who saw apprenticeships as a solution for enriching the industry's labor pool in their state.

The apprenticeship programs they are near to completing stand as examples of how printing companies and schools can cooperate in channeling well-trained and eager-to-work young people from the classroom to the shop floor.

The plan first took shape at a November 2017 meeting of the Susquehanna Litho Club, where printers including the H&H Group (Lancaster) and Standard Group (Lititz)

explored the idea with representatives of Thaddeus Stevens College of Technology (Lancaster), the Milton Hershey School (Hershey), and the Apprenticeship and Training Office of the Pennsylvania Department of Labor and Industry (Harrisburg).

Starting from Scratch

The 1,590 registered apprenticeship programs that the state agency currently administers are training nearly 17,000 people in a variety of industries. It had authorized the creation of apprenticeship programs in printing before, but these had become so outdated “that they were really useless” in a contemporary setting, according to Williams of H&H Group. “Since they didn’t relate to our business, we were basically starting from scratch.”

For a long time, reviving apprenticeships in Pennsylvania had been a personal crusade for Michael DeAcosta, an instructor of graphic communication technologies at the Milton Hershey School. This institution, founded by chocolate magnate Milton S. Hershey and his wife, Catherine, in 1909, provides all-expenses-paid education in grades pre-K through 12 to children from low-income families.

Its trade-focused curriculum includes a graphic communications pathway that provides comprehensive coursework in print-related subjects in the high school years. About 100 students currently are enrolled in it.

DeAcosta also served as the president of the Susquehanna Litho Club in 2012 and 2013, during which time he says he spoke “with any employer who would listen” about reintroducing apprenticeships for print industry jobs. In a second, four-year term as president from 2017 to 2021, “that was my main focus.”

DeAcosta organized the Litho Club meeting at which the printers, the schools, and the state agency agreed to create state-registered apprenticeships for three job descriptions: customer service representative, finishing operator, and wide-format printer operator.

Young Trainees in Waiting

The printers worked with Thaddeus Stevens to design the three tracks in keeping with state requirements. At Milton Hershey, DeAcosta set up a parallel pre-apprenticeship program in binding and finishing that lets his high school students get credit for hours of training that they can apply to their full-time apprenticeship experiences later on.

Michael D. Brady, an instructor in graphic communications and print technology at Thaddeus Stevens, worked with H&H Group and Standard Group to define what an apprenticeship in the three job functions would look like. With his guidance, H&H Group developed the programs for customer service and wide-format production. Standard Group worked with him on the apprenticeship in finishing.

“People can get a little confused about what an apprentice is, so we wanted to have a clear example and a clear story to tell,” Brady says. The Pennsylvania apprenticeships

remove any ambiguity by providing immersive, hands-on, earn-while-you-learn occupational training leading to professional competence in each job's principal tasks.

The state-approved apprenticeship in finishing that Standard Group developed, for example, consists of 2,000 hours of on-the-job training with specified pay increases occurring at various stages of progress. The subjects to be mastered span the entire range of processes and machine functions found in a modern bindery, from folding, trimming, and cutting through stitching, perfect and case binding, and value-adding techniques such as die cutting and embossing.

Brady says that because evaluations are based on the competency that apprentices demonstrate instead of the time they put in, trainees can move through the programs relatively quickly: in about 18 months, as opposed to the two or three years that some apprenticeships take.

Employers administering the programs pledge to comply with state rules about what apprentices will be paid during their training and how their equal employment opportunity and affirmative action protections will be upheld. In some cases, employers may be eligible to receive financial reimbursement for apprenticing people from population groups the state recognizes as underserved.

Pennsylvania, and Beyond

A central objective of the printing program was to make it portable. This, says Brady, was the point of working with both H&H Group and Standard Group: "to show that we are not just building this for one company. We are trying to build it for central Pennsylvania, which is right for our community."

Employers outside the region may benefit as well. Williams explains, "we had to set it up in such a way that we would consider the broader view of companies, and not just how our company was set up, so that it could be used by other companies. Because it's not just for the H&H Group. Programs are available for any printer across the entire United States."

The state approved the program in 2020 after a review before a board of examiners. Williams says that as a result, printers anywhere in the country who want to apprentice people as wide-format operators, finishers, and CSRs don't have to invent their own methodologies – they are free to implement the Pennsylvania apprenticeships instead.

Or they will be, as soon as the programs clear their final hurdles. COVID-19 slowed down implementation, and DeAcosta says a related instructional component required for state recognition is still being finalized. Meanwhile, his students at Milton Hershey continue to rack up hours in pre-apprenticeship and will be ready to move into the program's full-time, earn while-you-learn phase once it's fully operational.

H&H Group's Heisey says the goal there is to bring on a full-time apprentice in wide-format production this fall. Expectations for the programs are high among all those who took part in creating them.

Succession Planning for All Jobs

Sue Overly, director of human resources at Standard Group, says that when the company took a close look at the demographics of its work force a few years ago, it realized the need for "succession planning" at all levels of employment.

Standard Group has always been an active local recruiter, working principally with the Career Technical Center (CTC), a vo-tech school in Lancaster, to create job opportunities for students. A number of them have advanced to management positions in the company. The company also sponsors three interns from Thaddeus Stevens.

Overly says Standard Group understands that workforce development through apprenticeships is a long-term commitment. "We know for the future that we need to get folks in here to get trained," she says. "It is a craft, and to get somebody up to full speed takes quite a while." Standard Group project manager Brian Keck – also treasurer of the Susquehanna Litho Club – adds that retirement of Baby Boom-generation employees over the next five to 10 years will make the task that much more urgent.

Brady notes that this is precisely what makes apprenticeships, with their scheduled pay raises and expanding sets of responsibilities, so valuable to employers who are concerned about long-range staffing needs.

"What I like about the apprenticeship and the relationship that it builds between the new employee and the company is that you are already talking down the road," he explains. "You are saying, 'I'm going to pay you more at this day, and more at this day.' It gets young people thinking forward, about what the next five years, what the next ten years are going to bring."

'A Much Better Placement'

Recruiting young people groomed for their jobs in this way is a better bet for employers than "hiring off the street," DeAcosta observes. "I would much rather hire a student who has expressed this interest in school and has put blood, sweat, tears, and time into it to say, 'Hey, this is my career.' That's a much better placement."

Preferring proven talent also heads off the potentially costly risk of gambling on people with no prior experience. As DeAcosta notes, "training and development is a huge expense for a company, and if that person doesn't last more than a few months, that's just a big waste of money."

Williams's advice for printing companies wishing to create their own apprenticeship programs is twofold: "Don't start from scratch, and don't do it alone." Reach out to state agencies, local groups like the Susquehanna Litho Club, and other printers in the area to learn what resources already exist and how best to build on them.

Heisey notes that H&H Group was fortunate to have trade-oriented institutions like Thaddeus Stevens College of Technology and the Milton Hershey School to build a program within its own back yard. He says printers who don't have that advantage can and should search outside their immediate vicinities for apprenticeship programs that they can use as models, "even if it's in the next state over."

Solutions: Partnership Programs

When business partners with philanthropy in the interest of both, much good can be done for people who need a head start and a helping hand. The printing industry is standing behind just such a venture in its quest to support workforce development.

Team Play for the Mariano Rivera Foundation

Sports fans need no introduction to Mariano Rivera, the record-setting New York Yankees relief pitcher who in 2019 became the first and still the only unanimous inductee into the National Baseball Hall of Fame. Today, the printing industry is getting to know the legendary game-saver as a nurturer of talent for its own lineup – a cause that his namesake foundation is pursuing in partnership with some of the industry's best-known technology vendors.

Established in 1998 by Rivera and his wife, Clara, the Mariano Rivera Foundation provides educational resources and career opportunities to children and youth from impoverished families. Its mission includes preparing young learners for careers in high-demand fields through mentorships and hands-on vocational training.

The foundation made its connection with the printing industry through Atlantic Tomorrow's Office, a provider of office printing systems, wide-format printers, and managed print services. According to Luis A. Villa, vice president of the company's production print group, the relationship got started through a relative of an Atlantic employee who was a friend of Rivera's. The Yankee great, says Villa, wanted to know if Atlantic could develop training in its specialties for the young people the foundation exists to help.

A presentation by Villa and Atlantic president Larry Weiss became the germ of a plan that was joined by EFI, Konica Minolta, Ricoh and other supporters and was formally announced at EFI's Connect customer event in January. EFI had come into the effort through its relationship with Atlantic, a member of its national network of equipment dealers.

The plan presented by the sponsoring vendors "was really well received" by the Mariano Rivera Foundation, according to Frank Mallozzi, EFI's chief revenue officer, who says EFI is fully committed to its success. "We need as many programs as we can to stimulate youths to participate in the industry."

Offered: Competitive Credentials

From the start, the emphasis was on making sure that the program would impart highly competitive job skills – a key objective for the foundation. “We understood that there was an opportunity to provide a level of certification and training to our students that would be beneficial for them,” says Lisa Vega, executive director. “Because that would provide them with career paths that they probably would otherwise never consider.”

This was to be accomplished by setting a high bar for professional instruction. What training for digital print equipment technicians often doesn’t include, according to Villa, are “certifications that are recognized in the printing industry”: for instance, the widely respected front-end and color management credentials that Atlantic’s field technicians hold.

Without these top-level abilities, he says, an equipment tech can be no more than a “nuts and bolts” repairman who doesn’t have the skills it takes to help users leverage the more sophisticated functions of their devices. Those who possess them are more employable and better positioned to command premium salaries.

Thus, the core idea was to build these career-enhancing certifications into the training being developed for the Mariano Rivera Foundation. Villa says that the curriculum, dubbed the Print - Design - Packaging Development Program, will let learners choose from among EFI’s Fiery Professional and Expert Certifications; Color Management Professional certification from IDEAlliance; product-related and other certified training from Konica Minolta; Ricoh’s Digital Literacy curriculum, designed by CalPoly; certification in the industry’s most widely used Adobe applications; and training in Lean Six Sigma Project Management, led by Six Sigma Black Belt instructors.

The program is under way with classes in session at the foundation’s headquarters in Gainesville, FL, where participating manufacturers have supplied equipment for training purposes. Premium Color Group, an Atlantic customer in Carlstadt, NJ, is hosting a satellite training center for the program in classrooms within its commercial printing plant.

New Start in New Rochelle

The program will be the main attraction at a 40,000-sq. ft. learning center in New Rochelle, NY that the foundation hopes to break ground for this summer and open by the end of next year. Villa says the plan also calls for offering classes at a college in or near New Rochelle while the learning center is being built.

EFI’s main contribution is access to its Fiery Professional Certification courses, which cover all aspects of operating one of the industry’s most widely used families of front-end controllers for digital printing systems. EFI showcased the program and the foundation at Connect, where Rivera’s keynote address was the high point of the event.

Promotion and media exposure, notes Mallozzi, are among the most meaningful forms of support that EFI can provide. He says that through its connections to the commercial

print industry, the company can act as an “on ramp” to the program for others who want to help – including those with jobs to offer to its graduates.

According to Vega, all of this is consistent with what the foundation hopes to accomplish on behalf of its students, who will receive the training free of charge. “By partnering with amazing industry professionals and corporations, we are giving them access to curriculums and opportunities that they would never be able to afford,” she says. This includes connecting students to local print companies who can potentially hire them when they complete their certifications.

The Virtue of ‘Longevity’

Vega acknowledges that neither she nor the foundation had much acquaintance with printing before joining forces with Atlantic and EFI. But, she says that there now are strong personal reasons to be impressed by what it has to offer the young people whose futures Rivera and his current teammates are playing extra innings to assure.

“It’s obvious that there has been longevity in the industry,” says Vega, referring to the multi-generational ties that so many of its members have to the craft of printing. “What that signifies to me is a community that I think is excellent for our boys. Because we are exposing them to an industry that is providing them opportunities that they never even thought of. Or maybe, as myself, they had very limited knowledge of the print industry and all that it encompasses.”

“And we’re grateful to have the opportunity to expose them to it, to get them started in the industry, with the hope of them wanting to continue and expand their horizons in it,” Vega declares.

Solutions: Professional Development

Three paths to learning for print personnel – one operated by a trade association, one created by a leading university, and one offered by a leading manufacturer – illustrate that opportunities for job enrichment and professional development are there for the taking by those who want to benefit from them.

PGAMA, Print[ED], and PrintSIP

In 2007, Paul Foster, then a printing teacher at a Baltimore County, MD, technical high school, was asked to obtain accreditation for the school’s printing curriculum under Print[ED], a standards-based rubric endorsed by the printing industry. Today, as vice president of Printing and Graphics Association MidAtlantic (PGAMA), Foster oversees a network of Print[ED]-accredited training programs in Maryland that support an initiative known as PrintSIP: an adult learning experience that helps employers keep workers’ skills sharp and their loyalty intact.

In 2001, Foster had witnessed the closing of the last post-secondary printing program in Maryland. Losing the academic route to continuing professional development inspired

him to create an alternative solution that printing companies could offer to their employees, confident that the training would be up to industry requirements. The idea came to fruition in 2015 with the help of an Employment Advancement Right Now (EARN) grant from the state of Maryland.

This is the concept that underlies PrintSIP, PGAMA's Print Strategic Industry Partnership. It consists of four training modules that run for five weeks, twice a week, for two and a half hours per session. Taught with a combination of lectures and hands-on demonstrations are: introduction to graphic communications; digital production printing; offset press and binding / finishing; and digital file preparation and output.

The courses are conducted at four Maryland high schools with lab facilities approved by Print[ED], PGAMA's accreditation program for schools that teach print and graphics. The modules are based on Print[ED] competencies, and instructors also are Print[ED]-certified.

Standards of Excellence

Print[ED] accreditation rests on six standards: evaluating the quality of the instructor; assessing the equipment and resources of the training facility; vetting the content of the curriculum; tracking program outcomes for students; having an active advisory committee; and operating on a budget that will sustain the program. Upholding the Print[ED] standards assures the quality of the PrintSIP program, which awards certifications to students after they complete a skills assessment.

PrintSIP's other key ingredient is public funding. Since its launch in 2015, the program has received \$350,000 in EARN grants from the state of Maryland. Additional money from a fourth EARN installment is anticipated. "That allows us to provide the training for free, so that companies and members in this area don't have to pay for that," Foster says. "We cover it."

So far, that support has made it possible for 105 people to complete courses with Print[ED] certification. COVID-19 temporarily halted some of the progress when the teaching labs had to close and registrations for the modules fell off, according to Foster. COVID restrictions led PGAMA to develop a virtual edition of the introductory course, in which working with "a box of stuff" supplied to students before they start the online sessions substitutes for hands-on exercises in class.

One of PrintSIP's initial objectives, a "learn-to-earn" commitment by PGAMA members to interview those who complete the courses, has not come to pass, Foster says. This was because most of those who signed up were "incumbent workers" – people already employed. "They knew what the industry was about, and they were able to take advantage of the courses."

The Sound of Press 'Thunder'

The program wasn't to blame for the dearth of newcomers. "It is virtually impossible to convince someone who is not familiar with printing at all to attract them to take part in

this training,” Foster observes. “They don’t have any idea of what they’re getting into, because they’ve never been into a pressroom, they’ve never smelled blanket wash, they’ve never heard the thunder of a 10-color Ryobi turning out at 18,000 an hour.”

“Sometimes you get somebody where it does hit the right notes with them,” Foster says. “But it’s hard to get new people into the industry, to attract them to things like that.”

He acknowledges that on balance, PrintSIP has been more effective for retraining and retaining current employees than for recruiting new ones. Job enrichment through professional development, he points out, breeds job satisfaction – the foundation of long-term loyalty.

Trainees new to their jobs “had a lot of light bulb moments where they said, ‘Oh, that’s how that works,’” Foster explains. Given insight into the bigger picture of how a printing plant operates, “I think they can enjoy it better. They have a purpose of why what they do is important.”

“The mail room knows that the press operators are going to give them a certain kind of work in a certain kind of way. Somebody used to say, ‘just do this’ when you got a got a task to do. Now they’re thinking about it more.”

Print[ED] and PrintSIP don’t belong exclusively to Maryland. Foster says that nationally, 150 schools have obtained or are close to obtaining Print[ED] accreditation. Georgia is home to the largest number of Print[ED] schools, with 32; there are 17 in Maryland.

At least two other regional printing trade associations have expressed interest in developing PrintSIP programs of their own, Foster notes. The groups will have to provide Print[ED]-accredited facilities and instructors in their membership areas, and they will need funding from state programs comparable to Maryland’s EARN in order to offer the training without cost. But, thanks to Foster and PGAMA, they already have proof that when printers take training and development into their own hands, the results can be satisfying indeed.

The Packaging School at Clemson University

R. Andrew Hurley, PhD, is an associate professor of Food, Nutrition and Packaging Sciences in the College of Agriculture, Forestry and Life Sciences at Clemson University, where he also leads the packaging design program at the school’s Sonoco Institute of Packaging Design and Graphics. He says that seven years ago, streams of e-mails from around the world inquiring about packaging education made him realize that accessible training in the subject would be in strong demand.

Hurley notes that when it comes to employment, packaging is feeling the same pain as other kinds of print-based manufacturing. “Packaging has always had a gap in it,” he says. “We actually have more companies that are requesting new recruits than we have new recruits for. That’s why training is really important. It’s difficult enough to find a

qualified candidate, but then to insure that they have a specialization in packaging is in many ways very rare to find.”

This inspired him to develop an online curriculum that became, with Clemson’s blessing, The Packaging School. It is a program of “andragogy,” or education for adult professionals, that wasn’t available within the pedagogical frameworks of most other colleges and universities.

Under Hurley’s direction, The Packaging School has trained nearly 10,000 people in courses ranging “from microlessons to fill in knowledge gaps” to full programs for those aspiring to become candidates for packaging positions. With the exception of hybrid courses that meet in person for their opening sessions and then go virtual, all of the coursework is fully online. The teaching staff of 12 have master’s or doctoral degrees in packaging-related subjects.

Continuous Curricular Improvement

The curriculum expands continuously, Hurley adds. “At any point in time, we’re probably working on a half dozen new courses. I like to tell my students that your biology textbook is probably going to be A-OK 100 years from now, but your packaging textbook may be obsolete in way less time.”

Nearly all of The Packaging School’s trainees are working professionals seeking either to fill personal knowledge gaps or to find ways in which packaging can add more value to their organizations. It’s common for employers to cover the costs of training, according to Hurley, who says students often come to the program for customized training in “cohorts” of five, 10, or even 40 people.

The most popular offering is the Foundations course, a “Packaging 101 boot camp” that consists of daily, 20-minute online sessions over 20 days. Those who complete it get a “starting point vocabulary” they can then build on, Hurley says. Also popular are the courses in corrugated containers, paperboard cartons, and sustainability. Learners can earn certificates in packaging science, packaging management, and automotive packaging.

Education by the ‘Chunk’

Hurley emphasizes that all of the training can be customized to users’ specific needs. “At The Packaging School, we can deploy a turnkey culture of learning for you,” he says. This could include giving the workforce access to more than 4,000 “chunks of information that usually can be consumed in less than seven minutes.” The chunks are drawn from lessons across the school’s entire catalog of programs. Each one, Hurley says “should have a direct application to something you’re doing.”

The Packaging School has attracted its thousands of students despite doing very little direct outreach, Hurley points out. Word of mouth has brought in what he calls “a very interesting gamut of folks” wishing to hone their packaging skills, including employees of large brands that purchase packaging.

Expanding the knowledge of this group is crucial, Hurley observes. “Many people come in thinking that packaging is a commodity, and it is not. So our goal is to help educate brands that packaging isn’t a commodity. It is a science, and understanding it will allow you to exceed your goals within the brand.”

Hurley says that knowledge gaps exist even among the personnel of packaging manufacturers. “It is very common to see that even folks in upper management don’t know the materials they work with, or are even able to name the processes that those materials go through to convert their finished goods. It really shows the need for education at the enterprise level.”

“if we want to change the paradigm of our industry, it’s making sure that everyone has a comprehensive understanding of the materials, processes, and technologies of packaging,” Hurley advises. “And that will rise all boats, if we all can have that foundation.”

The Kathleen Kyme Press Forward Scholarship

No one knows better what it takes to run a digital press than the manufacturer of the equipment. By the same token, no one knows better than an OEM how tough it has become for the OEM’s customers to find operators skilled enough to make the most of what the equipment can do.

HP and Dscope, the user group for HP digital presses, have acted on those insights by creating the Kathleen Kyme Press Forward Scholarship, a pathway for recipients to enter the industry as professionally trained operators of HP Indigo digital presses. Honoring the memory of HP solutions architect Kathleen Kyme Giudice, the program offers fully-paid, hands-on equipment training as well as exposure to potential employment opportunities within the Dscope community.

HP understands the need for manufacturers to take a hand in addressing the industry’s recruitment difficulties, according to Stephanie Bell Hill, business development manager for HP’s personalization and industrial business. The company’s leadership, she says, “is aware that trained operators of digital presses are in short supply due to an aging workforce, a shift from analog to digital, and lack of awareness of the print industry as a rewarding career.”

“The recruitment, retention, and training of our future workforce has been consistently identified as the number one issue that faces our industry today,” Hill acknowledges.

Through the Kathleen Kyme scholarship, HP aims to find qualified applicants, give them Indigo-specific press operator skills, and bring them to the attention of Indigo users who need those skills to fill current job openings.

“Qualified” means what the word implies: candidates must have a minimum of a two-year college associate degree, technical school certification, or equivalent work experience in the graphic arts industry, among other requirements. Special consideration is given to graduates of vo-tech high schools with Print[ED] certification (page 00).

Those accepted to the program will spend from five to 10 days at HP’s Experience Center in Alpharetta, GA, where they acquire Level 1 operator skills on HP Indigo presses for commercial print, folding carton, label, and flexible packaging applications. When recipients complete the training, HP will share their profiles with printing companies throughout Dscoop’s North American network.

HP will cover all expenses during the training, including lodging, transportation, and meals. The company has funded three seats for scholarships in its 2022 fiscal year, according to Hill.

She adds that one thing HP hopes to accomplish with the program is to overcome “the misperception that print is not a technologically advanced field.”

“Increased awareness of career options in printing and graphics is needed to motivate young people – students – to pursue this profession,” she says. The Kathleen Kyme Press Forward Scholarship takes a meaningful step forward in that direction.

Solutions: Scholarships for Industry Study

As the costs of professional education continue to rise, financial support for those who wish to train for industry careers becomes more urgent. Organized fundraising by industry groups is helping students to offset some of the expense.

The Print & Graphics Scholarship Foundation (PGSF)

The most comprehensive listing of educational institutions that teach subjects the printing industry needs more people to master is the Directory of Schools compiled by the Print & Graphics Scholarship Foundation (PGSF). For the 2021 – 2022 academic year, PGSF made scholarship grants to students at 100 of the more than 360 schools in the directory, which lists high school graphic studies programs as well as college-level ones. The grants totaled \$527,000, the highest amount awarded by PGSF in the past 20 years.

PGSF has been helping to support students in academic print and graphic arts programs since 1953. Jeff White, the foundation’s director of development, says the goal is to award \$500,000 in scholarships annually. Of the 500 to 600 applications received each year, about 200 are approved for grants averaging \$2,500 each – a figure that White says PGSF wants to increase in keeping with the rising costs of education.

Grants are renewed automatically as long as recipients maintain at least a 3.0 grade-point average. To qualify for them, students must be enrolled in accredited graphic arts studies programs offered by any of the institutions listed in the Directory of Schools.

Must Be Print-Centric

An accredited program, White explains, can address any printing process as long as “imaging on a substrate” is its focus. This excludes applications for grants in non-print areas of study such as pure graphic design or web architecture. “That’s not what the scholarship fund is for,” he says.

White adds that PGSF, recognizing that the costs of providing education in print and graphics “have gone through the roof,” now makes grants directly to schools in need of support. These funds have been used to purchase presses and other equipment on which students can be trained.

PGSF’s support isn’t limited to mainstream educational institutions. Its non-academic beneficiaries include The Mariano Rivera Foundation and the Women’s Press Collective, both of which provide vocational training in graphic arts to populations that typically do not have access to it. PGSF also offers “part-time scholarships” for people who are working and studying simultaneously.

The deadline to apply for PGSF scholarships in the 2022 – 2023 academic year is May 1, and the foundation is eager to disburse the money. “If we can find more qualified students, we can find the money to give to them,” White declares.

The Graphic Communications Scholarship, Award and Career Advancement Foundation (GCSF)

Based in New York City, the Graphic Communications Scholarship, Award and Career Advancement Foundation (GCSF) claims to be the largest regional scholarship foundation in the country. It certainly ranks among the most generous. Since making its first grant in 2002, the group has awarded 450 scholarships worth more than \$1 million to high school and college students preparing for careers in all phases of graphic communications.

The grants come from an inventory of separately endowed scholarships that GCSF, a 501(c)(3) organization, coordinates and helps to raise money for. Students, who earn the awards by submitting portfolios, letters of recommendation, and supporting essays, may continue to apply for and receive them until they graduate.

No Salaries or Overhead

Voluntarism in its purest form remains the cornerstone of everything that GCSF does. Its officers, who are uncompensated, work without professional staff or dedicated office space. This means that the program has virtually no overhead expenses – all of the money collected passes through to the students as stipends.

It has been done this way from the first time GCSF's founding members sat down in a borrowed conference room to discuss how to revive a small number of print industry scholarship funds that were not being actively managed. Other scholarship endowments have come under GCSF's custodianship since then, but the group's insistence on channeling 100% of their proceeds to students has not changed.

Over the years, the GCSF scholarship program has become a focal point for educational giving by graphics industry trade groups in the New York City metro area. GCSF sustains the financial assistance it provides by drawing upon a network of individual donors, trade associations, and corporate sponsors.

Besides fundraising, GCSF also operates a mentoring program that pairs metro area students with seasoned members of the industry for enhanced, hands-on learning experiences in real-world business settings.

In this way, students gain both the practical knowledge and the personal confidence they will need for success in their chosen fields. GCSF also arranges internships and solicits contributions of training aids and educational materials for use in graphic studies programs.

Diane Romano, who chairs GCSF's board of directors, says the foundation's mission is now evolving in the direction of serving as a hub of support for other efforts being made on behalf of graphics education in the metro area.

Conclusion: What Every Printer Can Do

There's no denying it: the present drumhead-tight labor market has been hard on the printing industry, and the competition for talent may grow stiffer yet. But, if printers harbor no illusions about what they are up against in the near term, they also see the labor shortage as an obstacle that they ultimately can overcome.

Automation will provide some relief as production continues to shift from offset lithographic presses to digital printing systems that require fewer people to operate. But, these people will have to be recruited, and the industry's analog manufacturing base, with its concurrent need for staffing, is not about to disappear any time soon.

That could mean enduring additional pain on the labor front. When positions remain open for extended periods of time, says Hatteras's Duerr, "I think it prevents you from growing. It may also force you to outsource more. It's going to also extend your turnaround times and create bottlenecks – the bottlenecks that get created when you are on a condensed schedule and everybody needs everything on the same schedule."

Limitations of Cross-Training

Many printers have turned to cross-training as a means of covering vacant positions. But as Almeter found out at Hodgins Engraving, assigning people to multiple roles for

this purpose works well only until it doesn't. During COVID, a reduced volume of jobs and the willingness of her staff to take on other responsibilities enabled the company to operate more efficiently with the people it had. But now, with the staff still lean, the volume is starting to come back.

With it comes the risk of production backups and logjams. Almeter says that on one occasion when an employee who handled shipping called in sick, "I was out shipping all day. I had projects to work on to further the advancement of the company that just got set back a day, because I'm shipping." However necessary it may be, diverting management personnel from their proper roles to shop-floor tasks "takes away from the goals of the company," Almeter says.

At BNP Empowered Print, Majerski says that the PIFI survey's finding about persistently unfilled job openings doesn't shock him. "We've certainly been experiencing that," he says. "We're reaching out across the country for those types of people now." But, he acknowledges that reluctance to relocate and the negative influence of the "Great Resignation" trend make the outreach that much less certain to succeed.

According to Moake of MTSU, this phenomenon of employees walking away from their jobs in record numbers "is still so new that it's changing our understanding of what it is and how it's affecting us. Because before, it was the idea that everyone was just leaving, but then, the follow-up was no, everyone's not leaving, everyone's trying to level up and move up to better-paying jobs. And so that's why I think it's still fluid, and how we're even defining that term."

"It's affecting every industry," he points out. The "perfect storm" of a low national unemployment rate, COVID-related workforce attrition, and the shift to remote work means employers in all sectors have had to "pivot and adapt" to the new ways in which people are looking at their relationships with their jobs.

In Majerski's opinion, though, the "Great Resignation" and the damper it puts on hiring won't last forever.

"We're living in a difficult time right now," he concedes. "But finally, people are starting to realize that they do need a job again, and we're slightly starting to see that light at the end of the tunnel. We're in a position where we have work – that's the good news. We have customers that want to print with us. We've all just got to navigate this difficult time, and get through it."

A Myth that Won't Be Missed

Something else the industry is finally starting to put behind it is the corrosive "print is dead" myth: the misinformed idea that print has no future either as a medium of communication or as a source of employment for newcomers.

Time, as it turns out, was never on the side of this canard. As Regan of Semper explains, the so-called “death” of printing was an event that many people today never actually witnessed for themselves.

“The newer generation is coming up in a world where, when people think of printing, they don’t think of newspapers,” he explains. “Fifteen years ago, when you said ‘printing,’ everyone thought ‘newspapers.’ That’s now out of our culture. The baseline of printing is now no longer based on older styles of printing.” Regan believes that the ubiquity of print and the alternative to “digital overdosing” it offers young people will help keep the appeal of the medium alive and well.

What’s more, even myths about death can die when people stop repeating them. The one pertaining to print is no exception.

At Standard Group, declares Overly, “we’re not allowed to say that in our building.” The word the company focuses on spreading is that “you can make a very good career out of production in print.” She says the company’s poster person for this message is the vo-tech graduate who, just three years after leaving school, “is now operating a million-dollar press” as a full-time Standard employee.

Mark Twain’s famous quip about premature obituaries also applies. As Heisey of H&H Group remarks, “the only place I’ve ever heard ‘print is dead’ is from print publications” trying to refute the idea in editorials. What is dying, he notes, “is getting kids into manufacturing jobs in general.” He puts some of the blame on education models that continue to privilege four-year degrees over the kinds of career training available from trade and vo-tech schools.

The Kids Are Alright

DeAcosta agrees that some people old enough to have seen the sun go down on things like newspapers and telephone books drew the wrong general conclusion about the future of print. But, he also thinks that people in the age group he nurtures as an educator at the Milton Hershey School aren’t making the same mistake.

DeAcosta says that lingering negative publicity “does not really affect the ability to recruit students, because students are pretty open minded” on the subject of printing (even if their parents sometimes need convincing). The real challenge, in his opinion, is that “the industry has not done a good job at promoting itself.”

This has been a source of frustration for White, who notes the lackadaisical attitude he sometimes encounters among the very companies that PGSF is trying to help through its efforts on behalf of education.

“We have a tough time getting in touch with printers,” he reveals, adding that many of them seem not to know that a foundation for print-specific scholarships exists in their industry.

White says, moreover, that judging from what he has seen, “the amount of crossover between the schools working together, collaboration between the schools and the local printers, is nil.”

“It’s amazing that the same printers who are always complaining that I can’t find anybody, aren’t talking to the school down the street to find interns and do work-study and things like that with the students,” he says.

The irony is that printers probably have no better places to recruit from than these hometown spawning-grounds of energetic young talent. Foster of PGAMA has seen just how well reaching out to schools can work.

‘Cool’ It Most Certainly Is

“When I go to an open house for a high school, I take about 200 pieces of entries from our Excellence in Print competition left over from the previous years. And if you just watch the students and parents interact with the printing, it’s amazing. If they’re reluctant to pick something up, I’ll pick up something cool, and I’ll say, ‘Pull those two slots and see what that does,’ and it pops into something 3D.”

“I think that’s how you’re going to attract students into the industry,” Foster says. “It actually helps win the parents over too. I can’t tell you how many times I’ve had comments from students where they say, ‘Wow, this is pretty cool, you can do this in here?’ Just to get their attention, and have the parents see that it’s not just newspapers that we’re talking about.”

Here at the grass roots is where the most of the effort has to be made, Regan emphasizes. Although broadly based initiatives like PGSF do valuable work, “they’re not in your community. You are. What are you doing? You’re feeling this pain. Are you going out and speaking at high schools? Every one of us should become the solution, and stop having the mindset that I’m just going to recruit the people that someone else trained.”

‘Because We’re Printers’

Regan also tells the story of a Semper client with a warehousing facility and an in-house digital printing operation. Semper learned that although the warehouse workers were paid better than the print staff, the turnover in warehouse jobs was much greater – the opposite of what would have been expected, given the disparity in pay.

Regan says that when Semper asked the digital press operators why they stayed on when they could earn more elsewhere, they replied, “Because we’re printers. We have a skill set, and we’re proud of it. We belong to something.” The warehouse workers expressed no such identification or loyalty.

“The printing industry used to have that a lot,” Regan reflects. “Maybe we’ve lost it a little bit.” He thinks reviving the spirit can help the industry attract employees like his

client's printing staff: people who want to be a part of something that they can take pride in. People who are doing what they love. People who are in it for the long haul. ###

About the Author

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Friends of the Future Workforce

The organizations mentioned in this report may be contacted as follows:

Semper Group

semperllc.com

International Institute of Buffalo

iibuffalo.org

Journey's End Refugee Services

jersbuffalo.org

Apprenticeship and Training Office of the Pennsylvania Department of Labor and Industry

pacareerlink.pa.gov/jponline/Apprenticeships

Milton Hershey School Career and Technical Education Program

mhskids.org/beyond-mhs/mhs-career-technical-education-program/

Thaddeus Stevens College of Technology Graphic Communications and Printing Technology Program

stevenscollege.edu/academics/associate-degrees/graphic-communications-printing-technology

Susquehanna Litho Club

slc.org

The Mariano Rivera Foundation

themarianoriverafoundation.org

PGAMA, Print[ED], and PrintSIP

pgama.com/areas-of-focus/workforce-development/printing-workforce-training-program-md

The Packaging School at Clemson University

packagingschool.com

The Kathleen Kyme Press Forward Scholarship
dscoop.com/content/Kathleen-Kyme

The Print & Graphics Scholarship Foundation (PGSF)
pgsf.org

The Graphic Communications Scholarship, Award and Career Advancement Foundation (GCSF)
gcsfny.org