Strategic Needs for Training of Print Production Staff for 2020

A survey and report from Intergraf, the World Print & Communication Forum (WPCF) and Sinapse Print Simulators

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Introduction

The continuing change to the printing and packaging industry from re-structuring, new technologies and services, is accompanied by the break down of traditional technical training structures in many countries, along with the massive loss of skills as the baby boom generation retires.

The availability of competent staff is a strategic need for the industry — but will they be available in 2020, and how and who will train them?

To better understand this dynamic Intergraf/WPCF in association with Sinapse have made a joint survey to identify evolving training needs in different countries. The survey was made with senior executives and/or board members of printing industry organizations and associations.

It was focused on technical production staff (who make plates, operate presses and finishing systems) who need to acquire and develop skills that ensure adequate quality and productivity.

The survey used a structured questionnaire over the internet using a 4-point evaluation scale (where 1 = low/unimportant – 4 = high/very important). An internet survey may have some variable perceptions of questions, nevertheless, the answers provide a broad indication of trends made more visible by the 4-point scale that divides answers into two groups, either. A: low/unsatisfactory or B: satisfactory/good.

Respondents were from print federations, professional printing organisations, market research companies, schools and R&D organisations. A total of 21 completed responses were received from 13 countries, UK, Canada, US, Germany, Spain, NL; Belgium, Latvia, Japan, Finland, Denmark, India, South Africa. The responding European countries represent about 50% of the 630 692 employees in the European print industry (Source – Eurostats). While this is not a large enough sample to draw definitive conclusions, it does provide a good indication of how the industry institutions see the situation and identifies some possible solutions to pursue.

PARTICIPANTS

- Belgium   EFTA (Flexo Association)
- Canada   (ICI, ex ICGC   )
- Denmark   Federation
- Finland   Federation
- Germany   BVDM (Federation), ZFA, VDMA (PrintPromtion), Infotrends, ERA (Association)
- India   Federation
- Japan   Federation
- Latvia   Federation
- Netherlands   GOC (national training centre for working printers), GLR (graphic school)
- Spain   Gremi (Federation) , Ricardo Casals Consultant
- S. Africa   Federation
- UK   BIPF (Federation), EFIA (Flexo Association)
- USA   PIA (Federation), GAA (Gravure Association)

Executive summary

Traditional printing processes (Offset, Flexo and Gravure) accounted for 71% of sales in 2015 with digital around 15%. Only a marginal decline is expected by 2020 with traditional processes around 67% and digital about 19%. The availability of competent staff to operate traditional equipment is a strategic need for the industry — but will they be available in 2020, and how and who will train them?

Survey results

1: Importance and Availability of Trained Production Personnel

All respondents rate as high, or very high, the strategic importance for the continuing availability of skilled production staff to print & packaging companies in their country. However, only half of the respondents anticipate that adequate numbers of skilled production staff will be available in 2020.

2: Apprenticeships and Schools

Apprenticeships are still considered to be an important way to train staff. The word means different things in different countries, e.g. in Germany, France and Denmark apprenticeships are linked to schools, but apprenticeships in the UK are no longer linked with school enrolment and oversight.

The trend for the number of apprenticeships and trainees is stable in about 40% of countries while 60% are in decline. Apprenticeships are still seen to be an important method to train new staff in 75% of countries and are seen to be important in the group of countries where apprenticeships are in decline. Less formal trainee programmes are seen to be strong in about one third of countries and as a moderate trend in another third. Adequate third party technical training is generally available (colleges, schools, etc) except in the USA and Japan — two of the world's largest print markets. Most European trainees are able to attend third party training centres. However, this is more difficult in Spain, India, USA and Japan presumably because of the time, cost and geographic issues in those countries.

3: Availability of adequate training programmes

Structured technical training for printing production was not rated highly. Only about 50% rated prepress and press production as satisfactory, while postpress is largely unsatisfactory.

4: Assessment of current training situations by country

Training effectiveness is only seen to be satisfactory in about one third of countries — none rate them as very high — and two thirds deem the situation to be unsatisfactory. Government and industry training support was mostly rated moderate to high — none rate them as very high. Adequacy of training providers/teaching staff is largely high to moderate. The same rating is made for the availability of formal accreditation to certify trainees but the countries are not the same for both.

Countries can be broadly classed into three broad groups for their current training situation

- **A — High Performance:** UK, Germany, Denmark, Finland, Netherlands with high scores in 4 or more of the 5 questions in this section.

- **B — Moderate Performance:** Belgium, Spain, Canada, India with 2-3 scores in the high (A) and low (C) group.

- **C — Low Performance:** USA, Japan, South Africa, Latvia with all low to moderate scores.

This suggests there are opportunities for the exchange of best practices or some form of cross training between countries.

5: International Approach and Distance Learning

About 65% of respondents agree that the industry's technologies, techniques and suppliers are global and that international multilingual training services could provide part of an optimized training solution. Distance learning is also a response in locations where there are travel time and costs constraints to attend training centres.

Over 75% of respondents agree that a workshop/forum to address an international training strategy could be worthwhile. About 65% of respondents said they would be interested to attend a workshop/forum.

Headline industry trends

The overall impression from the survey is that the level of satisfaction perceived by federations and associations around training is mixed, participating consultants are less confident, and some participants outside of Europe (Ex USA, Japan) are alarmed. The general is consensus is that training for press and postpress is inadequate, but there is general satisfaction with the overall training currently available (even though it is vanishing in many countries).

All survey participants agree that trained personnel are essential but only half think there will be enough such staff in 2020 for the traditional print processes (offset, flexo, gravure) that will continue to be dominant. However, there are fewer and fewer schools teaching print production for these processes and in some countries there are no schools.

Training solutions based on students going to a campus for three years is no longer viable for production personnel in many countries. As traditional training declines it needs to be replaced by a structured work/study solution (adapted apprenticeships, learning-on the-job on-site supervised, accredited training).

Distance learning

International distance learning is identified as a possible partial solution for the training gap that is becoming apparent. This technique is much more developed in the US. European respondents who have implemented distance learning have done so for 'soft skills' like sales and management and seldom for production process skills.

One respondent who provides on-line production skill training chose the 'free model' but this has not been a success. One international supplier has successfully implemented cloud-based press simulation training with a printer operating multiple plants in North America and China (this uses local languages for training, the trainer's language for course construction, review, evaluation and comparison). In general, the free offers of distance learning are not a viable business model, and for print, there are currently few other offers. One key success factor for distance learning is to improve take-up by using a more 'gamified' approach to appeal to the target market of young vocational trainees, to be project oriented and "BYOD – bring your own device" (smartphones-tablets-PCs-Macs-), current offerings in the graphic training field rarely cover the full gamut.

One way of sharing solutions is to package training as on-line learning that can be used by itself or as part of a 'blended solution of on-line learning, and on-site training (at schools or production sites). The technology for this is moving rapidly but the business models are not yet well-defined.

Summary — changing training dynamic

1. Traditional print processes will continue to dominate printing in 2020 but the availability of efficiently trained staff to operate them is in doubt. This is a strategic issue for the industry.

2. Printing technologies and skills to operate them are international but most current training is national, and may not exist at all.

3. Schools are decreasing or dropping print production courses.

4. Apprenticeships are declining.

5. It is unclear where new production personnel will be found and how they will be trained.

6. International distance learning offers a training alternative- on-line or blended.

7. Accreditation (assessment and certification) is crucial.

8. A financial model to provide continuing availability of training needs to be identified.

9. There are a group of 'high performance' countries with regard to their current training situation that may provide opportunities for cross-industry best practices and training solutions. .

Recommendation

The next step should be to organise an international workshop to answer these points, identify the needs and opportunities for training. Attendees should include relevant associations, trade unions, training and accreditation providers, developers of training initiatives and representatives of printing and packaging companies responsible for recruiting and training workers.

Changing Dynamic of the Industry and Training

While print training schools continue to be the preferred source of qualified staff, they are generally suffering from lower enrolments that make it difficult to justify resources for some courses and particularly investment in print equipment that is barely used in a training environment. Many print programmes have closed during the last decade, and many countries no longer have any active non-digital print programs.

Sparsely populated areas have insufficient students (even when they have large print plants). Metropolitan training centres increasingly focus on graphic communications, workflow and digital production as responses to the current market, but they ignore the underlying need for trained production personnel in the more classic print production processes (Offset, Flexo, Gravure) that still produce the vast majority of printed material.

The continuing change to the printing and packaging industry from re-structuring, new technologies and services, is also accompanied by the break down of traditional technical training structures in many countries, along with the massive loss of skills as the baby boom generation retires.

Some relevant print business indications from Intergraf and PIRA are that:

- 2015 sales for the European Print and Packaging market are estimated at €156 billion in 2015, this should rise to €158 billion in 2020.

- Packaging is expected to move from slightly below 50% of this sum to well above 50%.

- Traditional printing processes (Offset, Flexo and Gravure) accounted for 71% of sales in 2015 with digital around 15%. Only a marginal decline is expected by 2020 with traditional processes around 67% and digital about 19%.

- Offset is expected to drop from 42% to 35%, flexo to rise from 22% to 24%, and gravure to hold steady at about 12%.

Therefore the demand for qualified personnel in traditional printing will still be significant in 2020.

The key question is the source of these qualified personnel

Examples of the changing training dynamic

The Intergraf survey on Future Skills in the Graphical Industry asked European schools (https://www.intergraf.eu/publications/item/141-future-skills-in-the-graphical-industry) about changes in their curriculum (what was being taught). Almost all the new courses concern non-traditional print production, they are more about addressing print as a media and less with mastering print production skills. Some examples of current trends include:

- In the Netherlands, none of the five graphic high schools teach printing any longer. There is no demand for apprenticeships at the largest (GLR) while there is some increase in demand for retraining for Flexo and Box making (GOC).

- Apprenticeships In the UK are no longer linked to training school programmes. Of the 20 printing schools that existed, only one is still teaching printing (Leicester). The approximately 500 apprenticeships are managed by the BPIF.

- None of Denmark's five print schools teach conventional printing, and two handle the 50 print apprentices in the country.

- In France and Germany, apprenticeships are still linked to schools, but demand is falling, as is the number of schools. The German figures (www.bvdm-online.de/druckindustrie/ausbildungszahlen/) show a 10% drop in print apprenticeships between 2014/2015.

- Many large printing companies feel that training should be on-site (no travel costs or time), technology-driven (no local trainers or classes), and self-guided (trainees to work mostly on their own).

Training technologies

During the last decade training technologies have become computer-based with on-line learning, simulation, augmented reality, and a combination of these. These start with simple systems using slides/videos with Multiple Choice Questions (QCM) to test the students. More sophisticated approaches (often found in Massive Open On-line Learning Courses (MOOCs) use peer analysis of assignments as a cost-free grading method. The most sophisticated approaches include simulators that have infinite responses to the process state and user actions to a wide range of defined production issues and problems.

Project based learning has been identified as the most the successful approach to print production training. The Canadian authority on On-Line Learning, Christopher Ross, says "a student must demonstrate mastery of the subject matter at the end of the course…. Producing a project that can only be achieved with mastery of the subject…. This approach draws from all forms of the skill set (learned in class or life-based to demonstrate competency". www.fipp.com/news/features/online-learning-trends-challenges-and-the-consumers-fuelling-it. *For more information on business models and current trends see On-Line Learning Trends in Appendix 1.*

Multi Lingual Tools

One answer to reduced training resources is to use those that are available more efficiently by making international training courses and certification available in multiple languages for international delivery.

Most pre-packaged training is only available in one or two languages. It is often assumed that all trainees can use English, but this is unlikely to be the case for most print production workers. This makes it difficult to widely use these tools internationally. For this reason, some international companies create their own training programmes and translate them as needed – but this adds to their cost, maintenance and management.

An optimum training programme is one that permits training in the local language, allows results to be compared in many languages and presented in the language of the trainer. The trainer can therefore be in a different country, time zone and may not understand the local language. Examples of these training modules include the VAPA *(Dutch Training Center for Paper, Carton and Corrugated)* available in some European languages, learn4print modules are available in German and English, and Sinapse simulators are available in major European and non-European languages.

Distance learning can be used successfully in an industrial environment but requires the employer to ensure its planning, define goals, coordination and review of training. It can be used for local training and remote supervision to greatly improve training efficiency, standardised best practice across production sites, reduce costs and on-site trainers. This provides existing schools the opportunity to reuse their expertise and expand their income base.

Supervised Distance Learning - Observations

- Definition: Local learning, local coordination, remote evaluation.
- Employees learn within the company that allots them training time, follows their results and recognizes their achievements. If this is not done, the training will not be followed through (*"in the absence of regular schedules, many online learners find time management a common struggle" source FIPP).*
- Remote evaluation can be done at a company training level or by instructors who are not physically present on site.
- Print schools* with significant pedagogic expertise can provide remote coordination, curriculum and evaluation. They could build and evolve a data base on training problems and progress.
- Producing in-house on-line learning programs where content is common to the industry is inefficient and will continually reinvent the wheel.
- A recent multi-lingual distance learning mechanism using press simulators (Sinapse) for Offset, Flexo, and Gravure is being used in a dozen countries for National Skills Evaluations and participation in the bi-annual Worldskills competitions.
  *Schools are using simulators to give 'hands on experience' without having to purchase and maintain presses.

Survey Results

Rating: 1 = low/unimportant, 2 = moderate, 3 = high, 4 = very high/important.

1: Importance and Availability of Trained Production Personnel

1.1	Very Low	Low	High	Very high
Belgium				●●●●
Denmark				●●●●
Finland				●●●●
India				●●●●
Japan				●●●●
Latvia				●●●●
S Africa				●●●●
Spain				●●●●
UK				●●●●
USA				●●●●
Canada			●●●	
Germany			●●●	
Netherlands			●●●	

1.1: *Strategic importance of trained production personnel.*

All respondents stated a high or very high strategic importance for the continuing availability of skilled production staff to print & packaging companies in their country.

1:2 *Will enough trained staff be available in 2020?*

1.2	No	Perhaps	Yes	Definitely
Belgium				●●●●
Netherlands				●●●●
Canada			●●●	
Finland			●●●	
Spain			●●●	
UK			●●●	
Germany			●●●	
Denmark		●●		
India		●●		
Japan		●●		
Latvia		●●		
USA		●●		
S Africa	●			

Only half of respondents anticipate that adequate numbers of skilled production staff will be available in 2020.

Comment: Responses can be grouped into two: (a) Those with a high confidence including Canada and some European countries; and (b) those of low to moderate confidence in the availability of adequate skilled resources this group includes USA, Japan and India that have very large print industries.

Some Europeans have more confidence in existing training methods, or think that the demand for new personnel will be low enough to fill from the current employment skills pool. While others see this differently, for example a major international packaging company stated "there are no more print production graduates, so we are hiring farmers and have to train them, and this gives us problems."

2: Apprenticeships and Schools

Apprenticeships are still considered to be an important way to train staff. The word means different things in different countries, e.g. in Germany, France and Denmark apprenticeships are linked to schools, but apprenticeships in the UK are no longer linked with school enrolment and oversight.

2.1: What is trend for number of apprenticeships and trainees (none, decline, stable, increase)?

2.1	Low	Moderate	High	Very high
UK				●●●●
Denmark			●●●	
Latvia			●●●	
S Africa			●●●	
Spain			●●●	
Japan			Don't know	
Belgium		●●		
Canada		●●		
India		●●		
Netherlands		●●		
USA		●●		
Germany		●●		
Finland	●			

The trend for the number of apprenticeships and trainees is stable in about 40% of countries while 60% are in decline.

2.2: Are Apprenticeships still important?

2.2	Low	Moderate	High	Very high
Denmark				●●●●
Latvia				●●●●
S Africa				●●●●
UK				●●●●
Canada			●●●	
India			●●●	
Spain			●●●	
USA			●●●	
Germany			●●●	
Japan			Don't know	
Belgium		●●		
Netherlands		●●		
Finland	●			

Apprenticeships are still seen to be an important method to train new staff in 75% of countries — they are seen to be important in the group of countries where apprenticeships are in decline.

2.3: *Is there a trend to replace apprenticeships with less formal trainee programs?*

2.3	Low	Moderate	High	Very high
Belgium				●●●●
Canada				●●●●
Netherlands			●●●	
Spain			●●●	
Japan			Don't know	
Germany		●●●		
India		●●●		
UK		●●●		
USA		●●●		
Denmark	●			
Finland	●			
Latvia	●			
S Africa	●			

The trend to replace apprenticeships with less formal trainee programmes is seen to be strong in about one third of countries and as a moderate trend in another third.

2.4: *What is the availability of adequate third party training (colleges, schools, etc.)?*

2.4	Low	Moderate	High	Very high
Canada				●●●●
India				●●●●
Germany			●●●	
Belgium			●●●	
Denmark			●●●	
Finland			●●●	
Latvia			●●●	
Netherlands			●●●	
S Africa			●●●	
Spain			●●●	
UK			●●●	
USA		●●		
Japan	●			

Adequate third party technical training is generally available (colleges, schools, etc) except in the USA and Japan — two of the world's largest print markets.

2.5: *Are trainees able to attend third party training centres (time / cost)?*

2.5	Low	Moderate	High	Very high
Denmark				●●●●
Belgium			●●●	
Canada			●●●	
Finland			●●●	
Germany			●●●	
Latvia			●●●	
Netherlands			●●●	
S Africa			●●●	
UK			●●●	
India		●●		
Spain		●●		
USA		●●		
Japan	●			

Most European trainees are able to attend third party training centres. However, this is more difficult in Spain, India, USA and Japan presumably because of the time, cost and geographic issues in those countries.

3: Availability of adequate training programmes

Do you feel that there are adequate structured programs (theoretical and practical) to support technical training for printing & packaging production for:

3.1: Prepress operations: Evenly split replies — 50% unsatisfactory / 50% satisfactory availability.

3.1	Poor	Unsatisfactory	Satisfactory	Very Good
Canada				●●●●
Denmark				●●●●
Germany				●●●●
UK				●●●●
Finland			●●●	
Netherlands			●●●	
Spain			●●●	
Belgium		●●		
India		●●		
Japan		●●		
S Africa		●●		
USA		●●		
Latvia	●			

3.2: Press operations: Satisfactory in about 55% of countries, unsatisfactory in 45% of countries

3.2	Poor	Unsatisfactory	Satisfactory	Very Good
UK				●●●●
Denmark			●●●	
Finland			●●●	
Germany			●●●	
India			●●●	
Netherlands			●●●	
Spain			●●●	
Belgium		●●		
Canada		●●		
Japan		●●		
Latvia		●●		
S Africa		●●		
USA		●●		

3.3: Postpress operations: About 75% unsatisfactory opinions.

3.3	Poor	Unsatisfactory	Satisfactory	Very Good
UK				●●●●
India			●●●	
Netherlands			●●●	
Canada		●●		
Denmark		●●		
Finland		●●		
Germany		●●		
Japan		●●		
S Africa		●●		
Spain		●●		
USA		●●		
Belgium	●			
Latvia	●			

Overall prepress and press production training ranges is only about 50% satisfactory while postpress is largely unsatisfactory.

4: Assessment of current training situations by country

How do you rate current training solution(s) in your country for

4.1: *Effectiveness of national skills training programme for printing industry?*

4.1	Poor	Unsatisfactory	Satisfactory	Very High
Denmark			●●●	
Finland			●●●	
Germany			●●●	
Netherlands			●●●	
UK			●●●	
Belgium		●●		
India		●●		
Latvia		●●		
S Africa		●●		
Spain		●●		
USA		●●		
Canada	●			
Japan	●			

Training effectiveness is only seen to be satisfactory in about one third of countries, none rate them very high, two thirds are unsatisfactory.

4.2: *Adequacy of government support?*

4.2	Poor	Unsatisfactory	Satisfactory	Very Good
Canada			●●●	
Denmark			●●●	
Finland			●●●	
Germany			●●●	
India			●●●	
Netherlands			●●●	
UK			●●●	
Belgium		●●		
S Africa		●●		
Spain		●●		
Japan	●			
Latvia	●			
USA	●			

4.3: *Adequacy of industry support?*

4.3	Poor	Unsatisfactory	Satisfactory	Very Good
Belgium			●●●	
Canada			●●●	
Denmark			●●●	
Germany			●●●	
Spain			●●●	
UK			●●●	
India		●●		
Japan		●●		
Latvia		●●		
Netherlands		●●		
S Africa		●●		
USA		●●		
Finland	●			

No respondent found industry or government support to be high. Only about half class it as satisfactory.

4.4: *Adequacy of training providers/teaching staff?*

4.4	Poor	Unsatisfactory	Satisfactory	Very High
UK				●●●●
Belgium			●●●	
Canada			●●●	
Finland			●●●	
Germany			●●●	
Netherlands			●●●	
Spain			●●●	
Denmark		●●		
India		●●		
Japan		●●		
S Africa		●●		
USA		●●		
Latvia	●			

4.5: *Availability of formal accreditation to audit & certify trainees*

4.5	Poor	Unsatisfactory	Satisfactory	Very High
Denmark				●●●●
Finland				●●●●
Belgium			●●●	
India			●●●	
Netherlands			●●●	
Spain			●●●	
UK			●●●	
Germany		●●		
Japan		●●		
Latvia		●●		
S Africa		●●		
USA		●●		
Canada	●			

4: Summary: Countries can be broadly classed into three groups.

GROUP	Program Effectiveness 4.1	Gov't Support 4.1	Industry Support 4.3	Training/Teachers 4.4	Accreditation 4.5
	UK	UK	UK	UK	UK
	Germany	Germany	Germany	Germany	
A	Denmark	Denmark	Denmark		Denmark
	Finland	Finland		Finland	Finland
	Netherlands	Netherlands	Netherlands		Netherlands
			Belgium	Belgium	Belgium
		Canada	Canada	Canada	
		Spain	Spain	Spain	
		India			India
B	India		India	India	
	Spain				
	Canada				Canada
	Belgium	Belgium			
	Latvia	Latvia	Latvia	Latvia	Latvia
	S Africa	S Africa	S Africa	S Africa	S Africa
C	USA	USA	USA	USA	USA
	Japan	Japan	Japan	Japan	Japan

A — High Performance: UK, Germany, Denmark, Finland, Holland : high scores in 4 of the questions

B — Moderate Performance: Belgium, Spain, Canada, India : mixed (high to low)scores on the questions

C — Low Performance: USA, Japan, South Africa, Latvia :low to moderate scores.

5: International Approach and Distance Learning

5.1: *Our industry's technologies, techniques and suppliers are global. Do you consider that international multilingual training services could provide part of an optimized training solution?*

5.1	No	Perhaps	Probably	Certainly
Belgium				●●●●
Denmark				●●●●
India				●●●●
Germany			●●●	
Latvia			●●●	
S Africa			●●●	
Spain			●●●	
UK			●●●	
USA			●●●	
Finland		●●		
Netherlands		●●		
Canada	●			
Japan	●			

About 65% of respondents agree that the industry's technologies, techniques and suppliers are global and that international multilingual training services could provide part of an optimized training solution.

India, USA and South Africa rate distance learning more highly, this may be because of their geographic size. Travel constraints and costs are also a factor in Europe. Another possible reason for some European interest is the potential to become an international training supplier.

Distance learning is much more developed in the US. European respondents who have implemented distance learning have done so for 'soft skills' like sales and management and not for production process training. One respondent who provides on-line production skill training chose the 'free model' but this has not been a success. One international supplier has successfully implemented cloud-based press simulation training with a printer operating multiple plants in North America and China (this uses local languages for training, the trainer's language for course construction, review, evaluation and comparison).

In general, providing distance learning for free is not a viable business model, and for print, there are currently few other offers. A key success factor to improve take-up of for distance learning is to using a more 'gamified' approach to appeal to the target market of young vocational trainees, to be project oriented and 'BYOD – bring your own device'.

5.2: *Would a workshop/forum to address training strategy be worthwhile?*

5.2	No	Perhaps	Probably	Certainly
Belgium				●●●●
Denmark			●●●	
Finland			●●●	
India			●●●	
Latvia			●●●	
S Africa			●●●	
Spain			●●●	
UK			●●●	
USA			●●●	
Germany		●●		
Japan		●●		
Netherlands		●●		
Canada	●			

Over 75% of respondents agree that a workshop/forum to address an international training strategy could be worthwhile. About 65% of respondents said they would be interested to attend a workshop/forum.

Appendix 1 On–line Learning Trends

The two major trends in pre-packaged on-line learning offers:

1.   Free – but pay for certificates

This is the case for most MOOC (Massive Open Online Course) offerings.

For printing, an example is : http://www.learn4print.com/VE/CourseOverviewForm.aspx

Some inherent problems with this approach are :

  A.   The business model: without income it is impossible to supply support or to update the learning tools and material. The printing example above will be discontinued because of this problem.

  B.   The "follow-through" : Students don't take them seriously if they or their employers are not investing (and thus requiring results). They underestimate the time needed and never finish.

2.   **Paid – with or without individual guidance** (the latter works better and costs more). With or without possibility to customize the content.

   Examples of these (for printing) are :

   * Paper, Corrugated and Flexo : http://www.vapa.nl/opleiding-en-trainen/catalogue-elearning/10/ (some European Languages)

     Cost, approx. 600€/module/person, MultiLingual. Non customizable.

   * Flexo (FTA-US- Operator Certification) : http://flexography.org/product/first-prepress-operator-certification/ (English)

     Cost : approx. $800/module/person (English). Non customizable.

   * Lean Management (PIA-US) : http://ilearn.printing.org (English)

     Cost : approx $300-$900 /module/person (English). Non customizable.

   * Offset,Flexo, Gravure : Print Simulators(Sinapse –France) : http://www.sinapseprint.com/ (Multi-Lingual).

     Cost : € 50-1 500/person depending on length of use and available problem sets.

     Customizable. Includes on-site or remote training supervision (by company)

Sinapse experience with large industrial clients is that they now insist on On-Site, Self-Guided (but supervised), Technology-driven learning. This minimizes cost and offers the possibility of evaluating and comparing results. It also makes it possible to adapt standard training programs to on-site problems.

Very Important: The training MUST take place on site, in paid time scheduled for the employee, with the scheduled enforced by the employer.

Paying the employee shows the company takes it seriously. Trying to do training in overtime or from home requires exceptionally motivated employees who have not already worked an overtime shift that day. This is rare.

References, Further Links and Contact Details

References

- "Online learning trends, challenges and the consumers fuelling it" January 2016:
- www.fipp.com/news/features/online-learning-trends-challenges-and-the-consumers-fuelling-it
- Augmented Reality, Learning in Social Networks : http://www.social-augmented-learning.de/
- Intergraf report (2014/15) : Future Skills in the Graphical Industry : https://www.intergraf.eu/publications/item/141-future-skills-in-the-graphical-industry
- FTA(USA) Operator Certification : http://flexography.org/product/first-prepress-operator-certification/
- VAPA (NL) Paper and Corrugated Training, including Flexo :
- http://www.vapa.nl/opleiding-en-trainen/catalogue-elearning/
- PrintPromotion (D) On-line Learning – production: http://www.learn4print.com/VE/CourseOverviewForm.aspx
- PIA (USA) On-Line Learning programs : http://ilearn.printing.org
- Sinapse Simulators (F) : www.sinapseprint.com
    - http://www.sinapseprint.com/FAQ-Implemention-in-Industry
    FAQ on industrial use of simulators: written before introduction of cloud system and remote training. Still useful as thinking points

Other Links **to Distance Learning for Print and Graphics industry**

- International Organisation of Packaging Professionals (US) : http://www.iopp.org/i4a/pages/index.cfm?pageid=2988
- EFIA (UK) : http://www.efia-academy.org
- LCC (UK) : http://www.arts.ac.uk/lcc/courses/short-courses/online-courses/
- Lynda.com : http://www.lynda.com/Acrobat-tutorials/Print-Production-Fundamentals/100221-2.html
- Henkel India: http://fp-academy.in/fpelms/login/index.php
- Delena (ES) : http://cursos.delenaformacion.com/
- Emagister (ES) : http://www.emagister.com/curso-online-sobre-impresion-offset-cursos-2886511.htm
- Euronova (ES) : http://www.euroinnova.edu.es/Curso-Impresion-Offset

Note: the Spanish Courses above seem to be more « distance learning (send workbooks get back correspondence course)

Contact
INTERGRAF
European Federation for Print and Digital Communication

upcf

Sinapse
Print Simulators

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