



Developments in Vocational Education in relation with industrial and labour market developments

- New Trends and Education in Graphics Industry

As. Prof. Igor Zjakić, PhD.



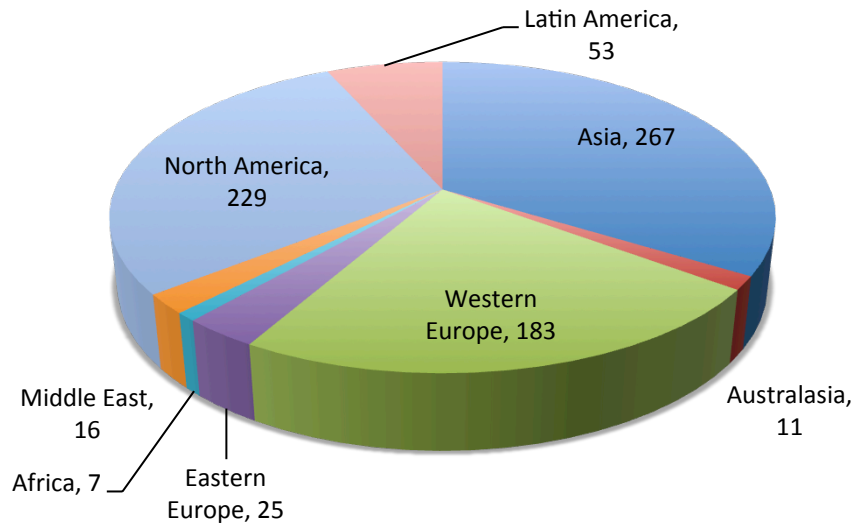
Curent technological achievements

- ✓ **Printers for camera and photography**
- ✓ **Additive manufacturing (3D)**
- ✓ **Erasable printing technology**
- ✓ **Desktop Label Printer**
- ✓ **Barcode Label Printer**

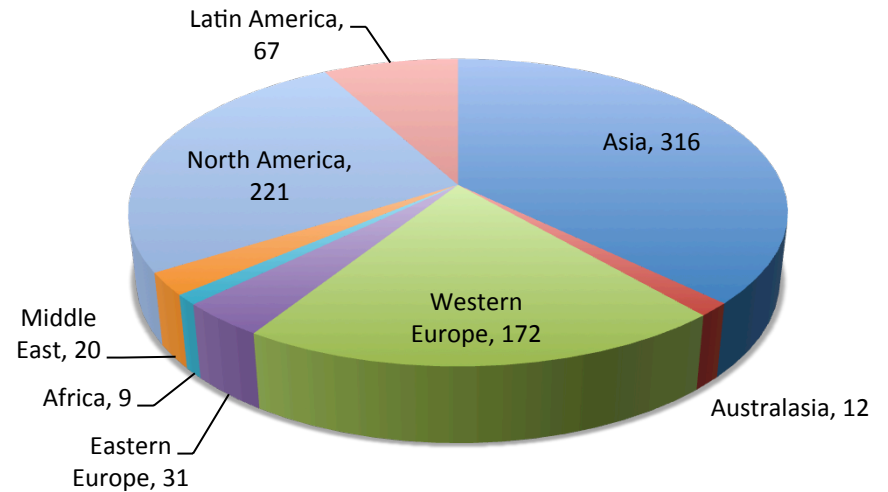


Geographic Regions – market share (dollars billion)

2011



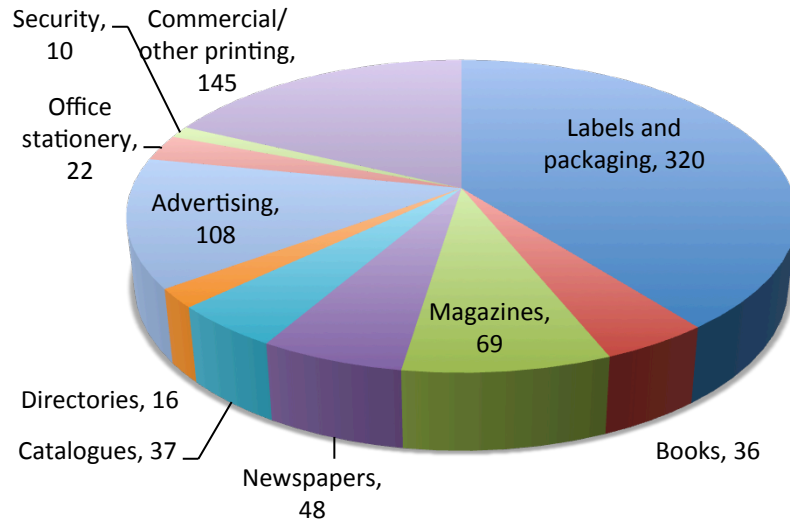
2016



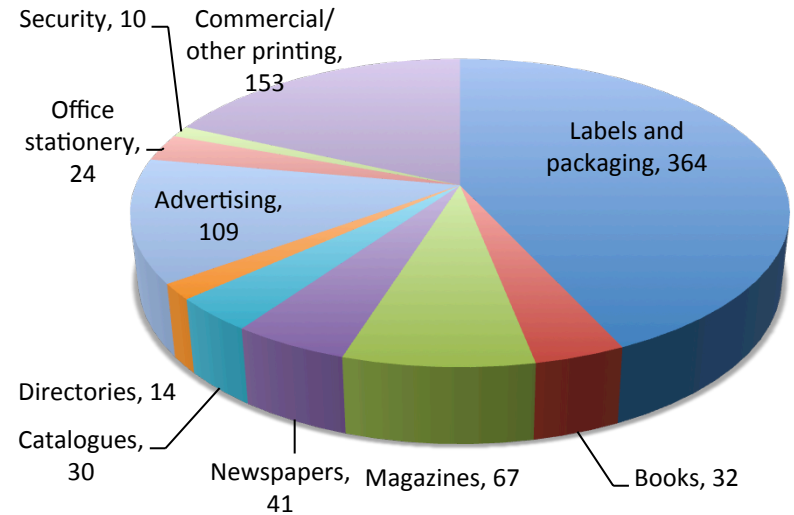


End-use sectors – market share (dollars billion)

2011

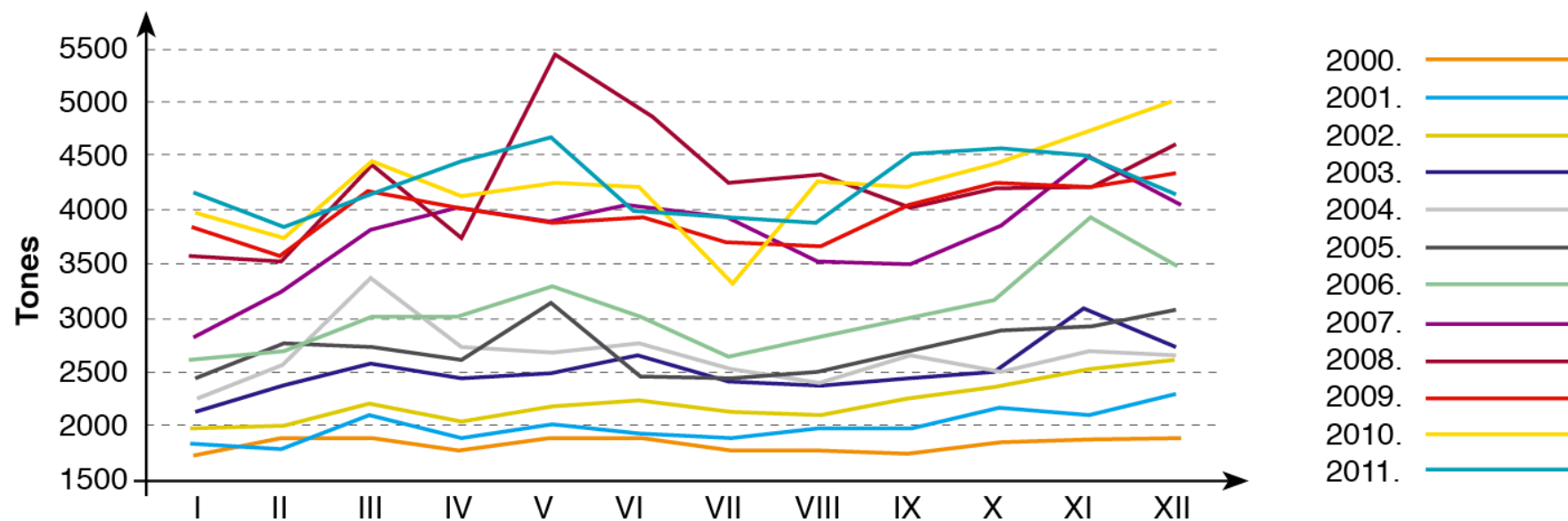


2016



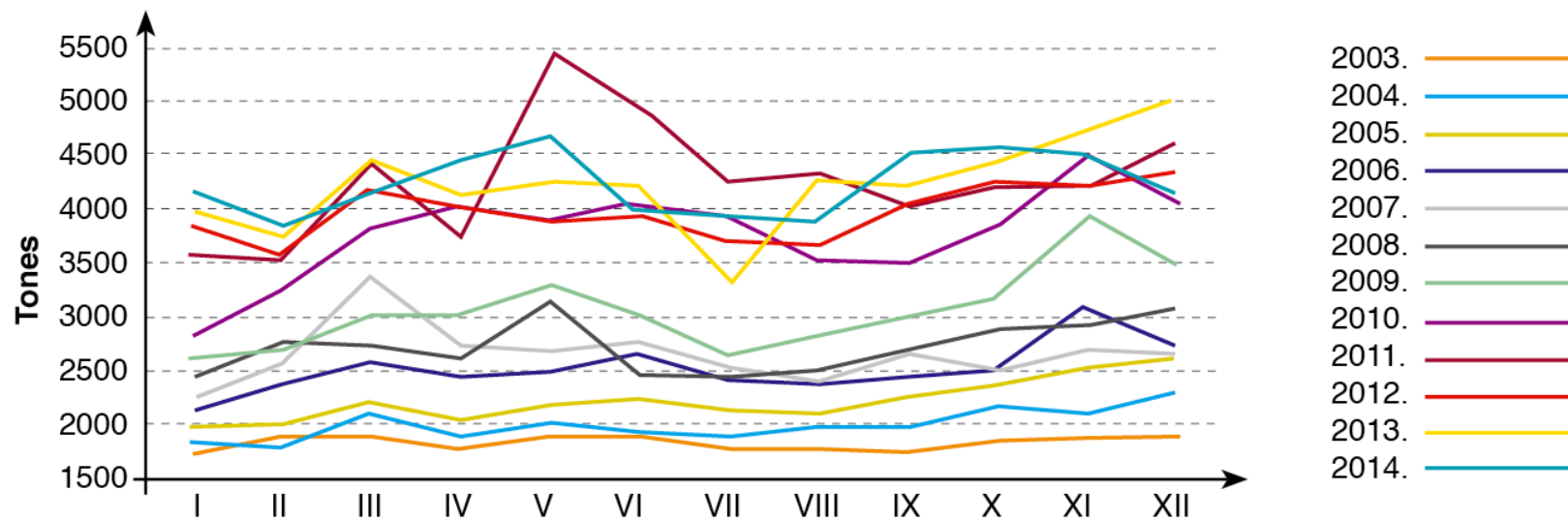


Newspapers and Magazine Printing (Croatia)



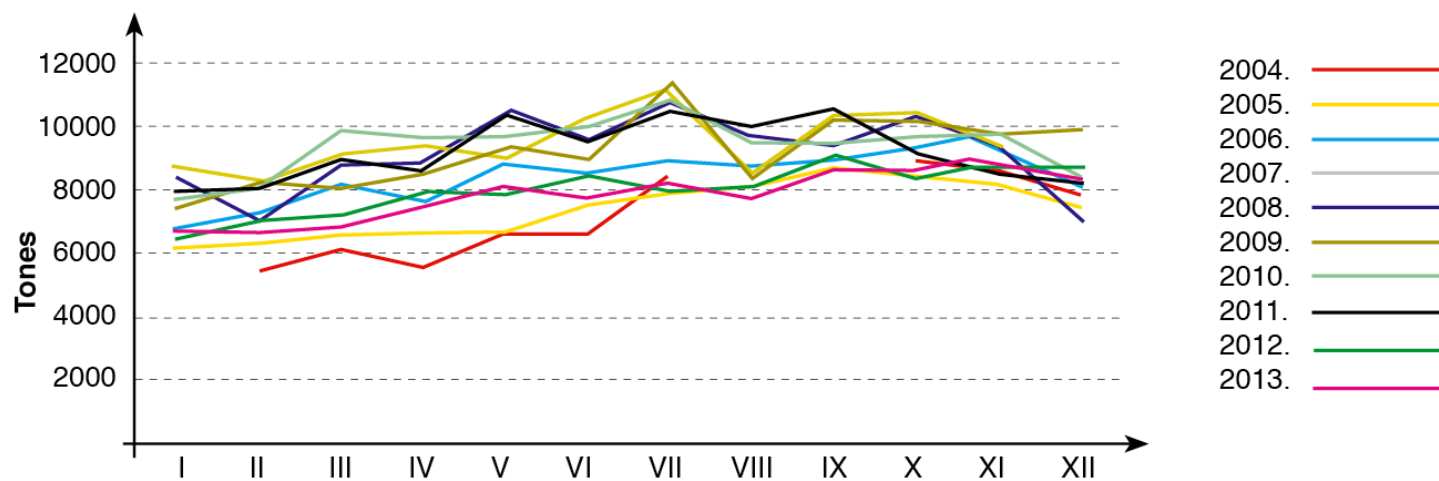


Commercial Printing (Croatia)



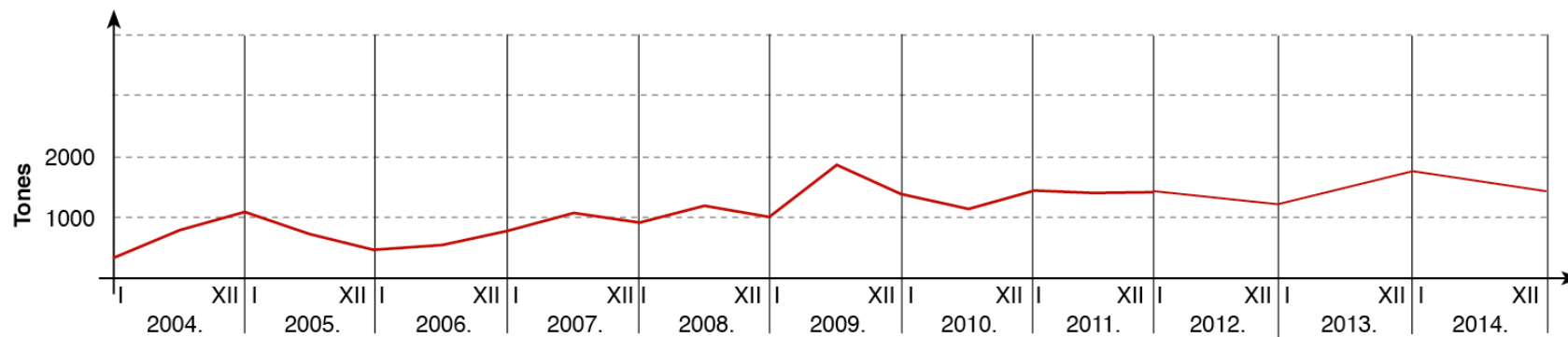


Cardboard Boxes and Corrugated Packaging (Croatia)



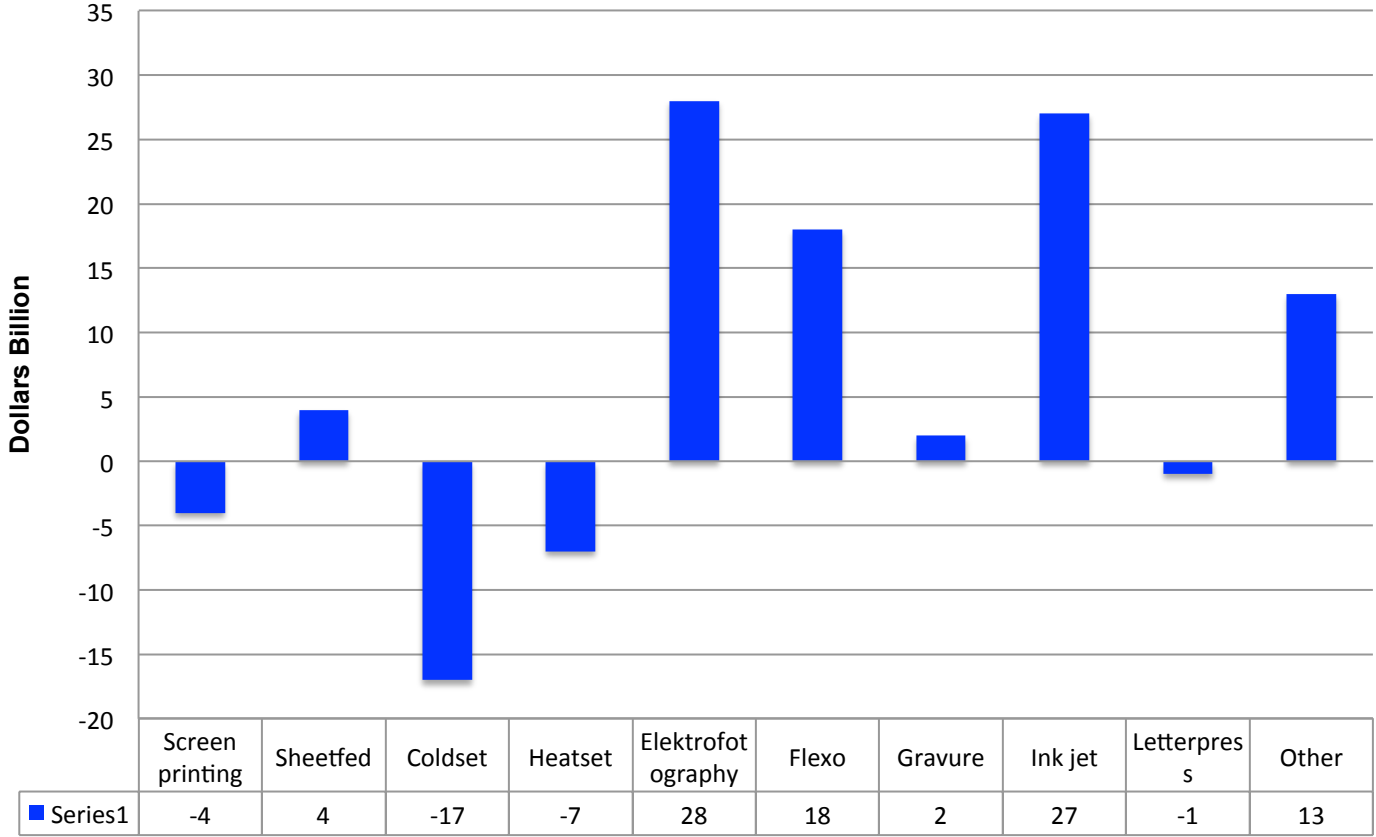


Books (Croatia)





Market share in future





Flexo printing trends

1. Flexo and gravure technique will dominate
2. Continuing improvements in quality
3. Benefiting from growth in packaging





Screen printing trends

1. Rapidly declining all over the world, except in Asia with some growth, wide format inkjet takes over





Book industry trends

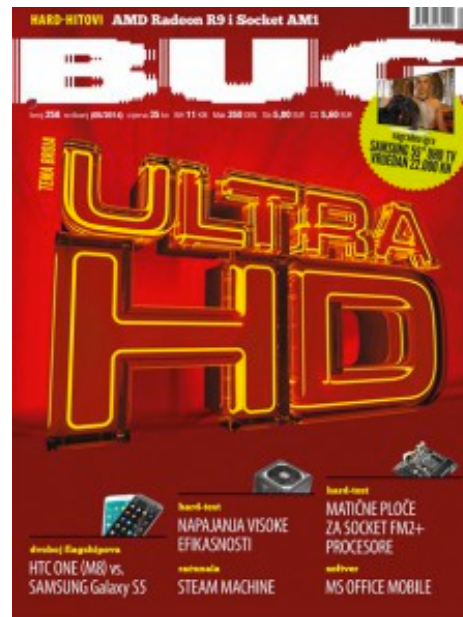
1. Digital printing takes over
2. Small run length
3. Marketing innovations
4. Electronic media





Magazine trends

1. Smaller run length
2. Opportunity for on-demand printing





Sheetfed printing trends

1. Still the dominant process but under pressure from digital
2. Reduced unit prices
3. Large format presses becoming more important
4. Growth in UV inks and varnishes





Web offset trends

1. Increasing completion for a diminishing market hitting commercial heatset
2. Smaller needs for newspaper printing
3. Opportunities for hybrid web-inkjet





Gravure printing trends

1. Will be used for high volume publications
2. Perfect quality
3. Complex and costly prepress stages to prepare cylinders





Inkjet printing trends

1. Future in wide format printing
2. Faster printing
3. Becoming part of an industrial decoration process



Electrophotography printing trends

1. Important in short runs and faster turnaround
2. Capability for personalized printing, especially in commercial products
3. Most books will be printed in electrophotography due to trends of short run printing





Education

In the fifth grade of elementary school the children are expected to know the answer to the questions such as:

- what was the name of the southern part of Mesopotamia?
- what was the name of the gown worn by Roman women under the tunic?

On the other hand children leave elementary school without knowing how to calculate percentages...

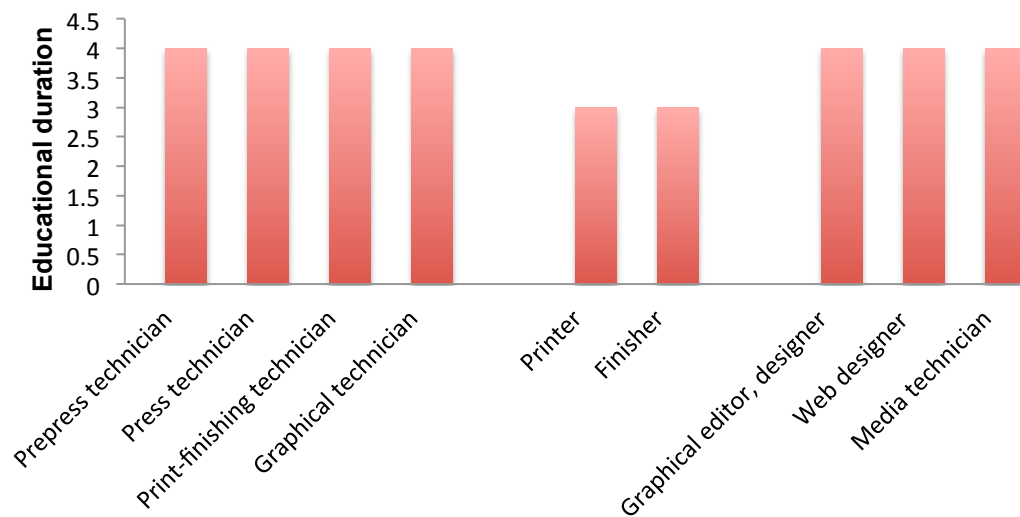
- how much is 30% from 50?
- Less than 50% of the children gave the correct answer

“60% of approximately 500 000 school children don’t understand what they are learning
TALIS (Teaching and Learning International Study)



Croatia

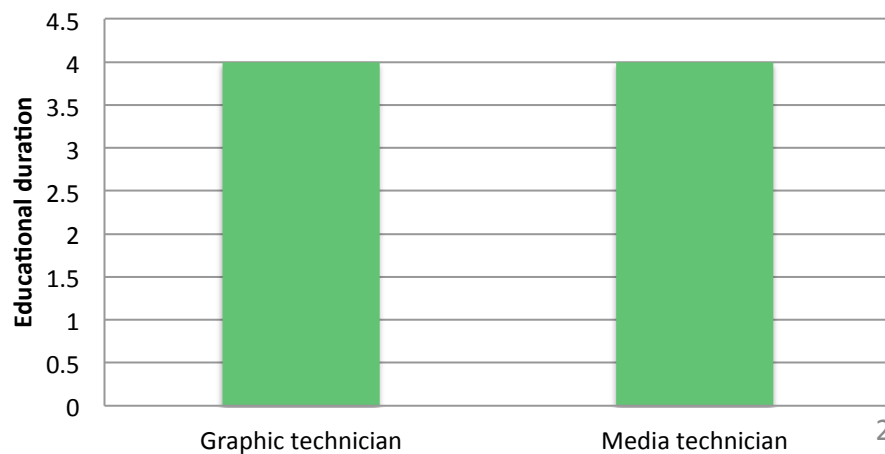
Profession



High school

Slovenia

Profession



What is missing?

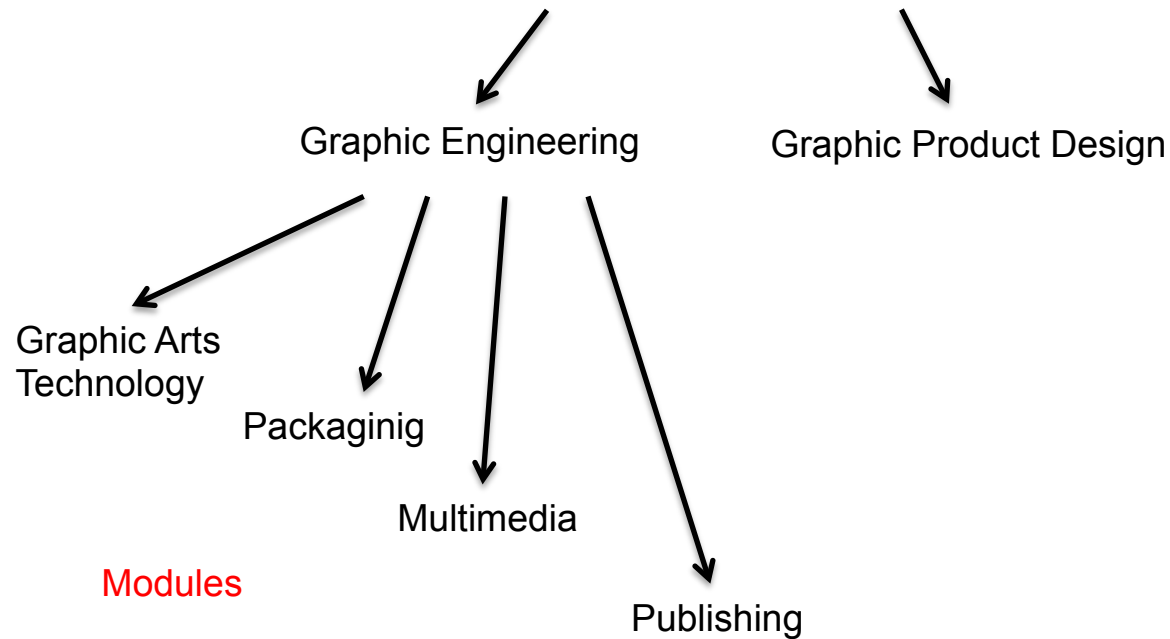
- Management
- Entrepreneurship



Faculty of Graphic Arts – Undergraduate course



Faculty of Graphic Arts – Graduate course

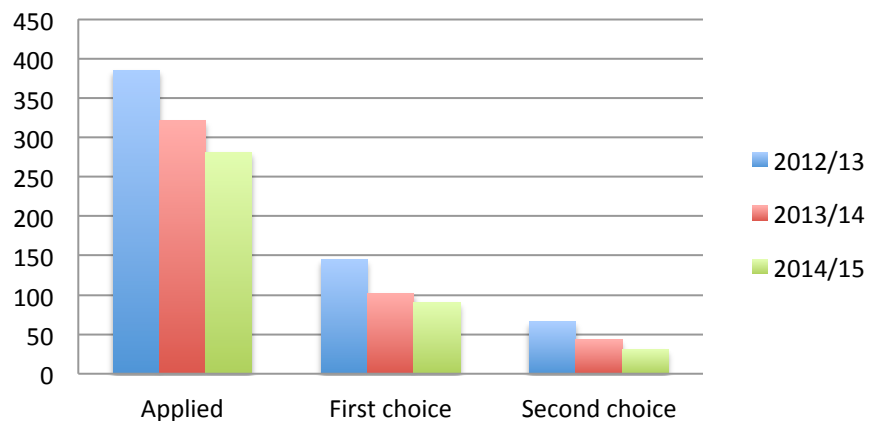


Modules

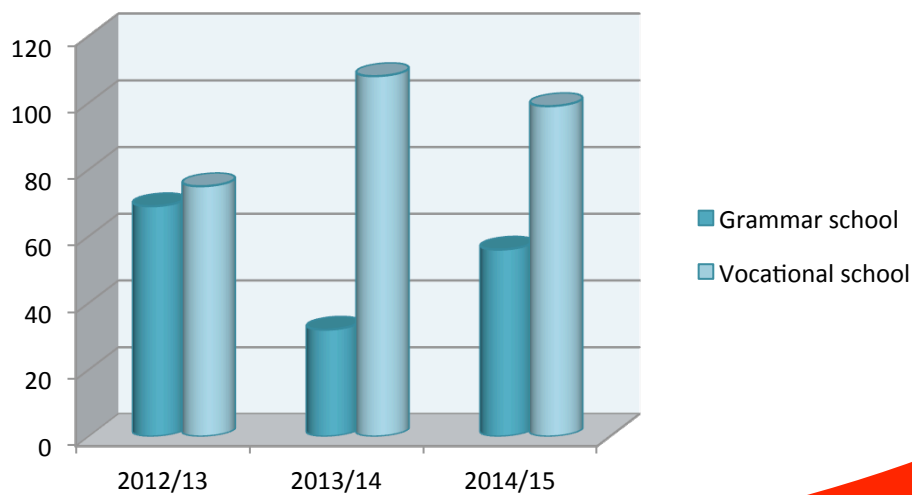
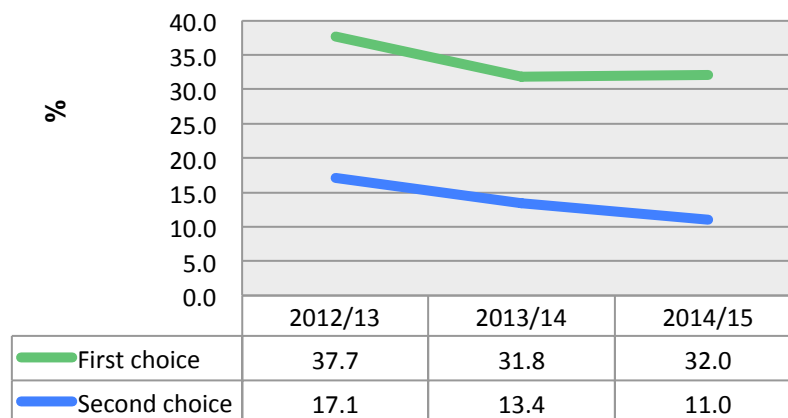


Faculty of Graphic Arts

Enrolment

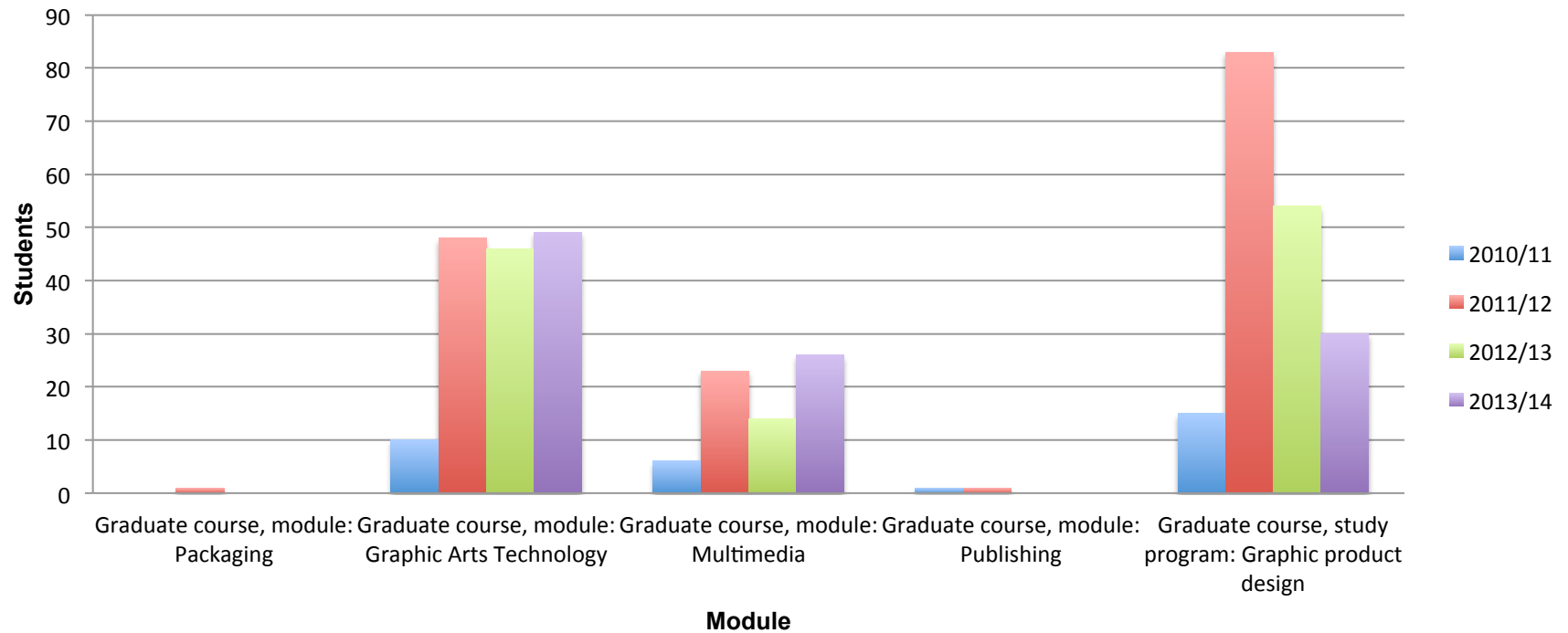


Choice





Number of students who finished their degree, MSc.



Average = 40%



Conclusion:

Predictions on the Major Trends of the Graphic Industry

- 1. Moving from a manufacturing to a service industry**
- 2. Printing products has to merge with electronic media**
- 3. More print on demand**
- 4. Packaging and labeling sector continue growing**
- 5. Electrophotography and Inkjet continue growing**
- 6. Sustainability “Eco-friendly”**
- 7. Communication design development**
- 8. Big market for products with added value**
- 9. Education and embracing digitalization**
- 10. Full media service to customers**



Thank you!!!

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