

Making but with Creativity——  
The Cultivation of Intelligence for Future Printing  
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## Abstract

Traditional printing education has been expanding into the field of graphic communication along with new media styles, such as Internet or mobile media, all of which can be named in the field of cross-media presentation. It seems that the printing foundations are crumbling and been substituting. Is it valuable to sustain talent cultivation standing on the foundations of printing? We have thought carefully and made some tests on it.

First, we tried to discern what the foundations of printing are? The development of printing technologies gives us the chance to share large amount of information quickly and widely. The replication of graphics and texts is the major role of printing. No matter what output scenario is faced, the printing technology is always required to realize a good showing appearance of the layout output with graphics and texts on it. Therefore, all the aspects around graphics and texts can be considered as what we serve.

Second, we expanded the printing technologies based on the 2D presentation of paper and inks to the super dimensions over 2D. From the aspect of materials, computer display and mobile phone are inclusive besides paper, plastic, textile and other traditional printing substrates. From the aspect of surface, the 3D pop-up models are inclusive besides the planar. From the information communication, the lighting, sonic and electronics are inclusive besides color tones.

Third, we are aiming the talent cultivation at the design and manufacturing thinking on new print-involved products, which could be based on systematic and complicated consideration for them. The paper-based product can be connected with the mobile apps and also the electronic sensors to create the interactive chances between the reader (or user) and the product with the help of Internet devices.

We think it interesting for the people with more experience and resources taken from the advanced techniques in a rapidly changing world. They will build the complicated design thinking with the abundant new possibilities based on the basic printing foundations, which are the excellent presentation of graphics and texts layout.

During the last 7 years, we set new courses in digital media with interactive contents, guiding students to collaborate on project with others from the Informatics & Computer Science and Arts & Design, but we still insist on the fundamental courses in printing that the students should master the knowledges,

which ensure and protect their physical understanding on product manufacturing. Our aim of talent cultivation in printing is to make the students know well the printing technologies, understanding the Internet tools, also with enough material knowledges and with design thinking on printed-involved products. In these years, the student teams with interdisciplinary background completed many interesting projects, such as 3D pop-up book and card design, interactive product with Arduino or Raspberry Pi electronic board, booklet or brochures using art papers with delicately structured surfaces. The new teaching system of undergraduate talent cultivation in printing is being built but more time is still needed.

Keywords: Printing engineering, product-focused, talent cultivation, Design thinking