E_design conference

Designer business skills: education vs professional experience

Theme: Challenging "the challenge of Bologna"

Secondary theme: Changes in professional work and research practices

Title: Designer business skills: education vs professional experience

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Summary

Within the framework of adjustments to Bologna, the problem of higher education design courses implies the need to define a design skills profile that can be accommodated to the structure of the new curriculum plans for 1st. and 2nd. cycle degree course. Bearing in mind that it is considered necessary to change the curriculum plans by the time the first graduates with the new skills profile enter the employment market within a minimum of three to five years, it is important for Polytechnic Schools to develop prospective studies that will enable them to anticipate the required changes relating to the future skills of designers.

In order to analyse the extent to which higher education design courses equip graduates with business skills, a study was carried out using a questionnaire administered to national designers working in the profession. The intention was to assess the extent to which these business skills were acquired by them either through higher education or through professional experience. The respondents were also asked

about their views on the development of future demands associated with these skills (Horizon 2015).

The set of business skills that featured in the questionnaire was defined on the basis of bibliographical research and a study of documentation gathered from the main national and international design organisations.

A statistical analysis of the results led to the conclusion that professional skills are acquired by designers above all during the course of their professional practice and that the contribution made by higher education was inadequate. With regard to their views on future needs, the respondents considered that design professionals will face a significant increase in performance requirements associated with business skills.

Given these conclusions and bearing in mind the adjustments to Bologna, a set of skills defined was analysed and a proposal for a curriculum structure developed which included the acquisition of these business skills throughout the course of the training provided on 1st. and 2nd. cycle higher education degree courses.

Keywords: design, higher education design courses, business and professional skills

1 Introduction

Competitive conditions in the world market mean that companies, in particular, and states, in general, are facing unprecedented challenges. The liberalisation of the world market, the exponential development of information and communications technologies, the mobility of populations and increasing state and private investments in R&D, together with the pace at which the results have spread, have led to high rates of change which affect all economic sectors and all states, whatever their level of development.

Increasingly, commercial success is seen to be heavily dependent on design, or the definition of strategies in the business world which include design, which has a great deal to contribute in terms of creating products that will satisfy increasingly wide-ranging consumer demands (Potter, 1999, p. 24).

It is opportune, at the present time, to explore some of the considerations that may contribute towards improving the training of designers, considering, as Bessa and Vaz

point out (2007, p. 29), that the implementation of the Bologna Process allows for substantial reforms to the system and is therefore profoundly changing university and polytechnic higher education in this country and in the rest of Europe.

In terms of training designers, it is important to consider the strong and weak points associated with the their acquisition and development of skills, in order to be able to intervene in structuring curricula with the aim of improving the training provided for current and future design professionals, enabling them to develop from beginners into experts or specialists. Loyens (1997) defends the importance of understanding the type of knowledge or skills that a designer should possess, in order to make a more solid contribution towards design education/training.

Some more proactive views are not restricted to recognising the gaps in the acquisition of skills during training but also focus on the relationship that should exist between the business environment and educational institutions. Thus, Monally (2004, p. 49) emphasises the urgent need to update existing courses to enable them to keep pace with ongoing developments in design and to assist and integrate them into national competitiveness, identifying design as an essential and focal activity that allows for greater flexibility and the interchange of tasks and knowledge, envisaging tasks carried out by teams grouped according to various abilities and aptitudes.

Mastery of a vast range of knowledge and abilities is now being demanded of designers, in addition to proven skills which, to date, have not been sufficiently valued in their professional training. Nevertheless, the business world considers them essential to the integration of design professionals within their companies.

2 The profile of the designer in the present-day context

Exploring the profile of the designer involves identifying the skills which it comprises. In any approach to defining the tasks of the professional designer within present-day competitive conditions, a vision of the designer performance emerges not only on a technical level but also in terms of business skills. Alencar (2005, p. 416) argues that the designer is the professional who is able to increase business competitvity, by creating specific niches and defining solutions that focus on functionality, quality, safety, comfort and the specific image of products and services.

In Portugal, the *Associação Portuguesa de Designers* (Association of Portuguese Designers - APD) refers to the current context of ongoing change within which the designer has to act and is called upon to intervene, anticipating problems, defining strategies, seeking to manage opportunities and heading multidisciplinary projects. It highlights the fact that the designer has to interact with different parties intervening in the process from various training backgrounds which, within companies or institutions, places him in the ideal position to lead and coordinate management and the processes of change (APD, 2008).

From the perspective of the APD, and in terms of characterising the work of the designer, the professional designer is involved in planning projects – which represent and introduce innovation – destined to establish the formal and functional qualities of objects, spaces, processes, services, systems and messages, involving an ongoing relationship with human beings and including the entire life cycle of products, from their creation to their production, use and eventual disposal at the end of their useful life.

With regard to the definition of the designer profile, Munari (1990, p. 30) defines the professional designer as a project planner endowed with an aesthetic sense, who works with the community. His work is not personal and individual but is the result of a group spirit and, in this sense, he is responsible for knowing how to organise and manage a particular group or team that has been created in accordance with the problem he is given to resolve. For the author, the aim of the designer must be to try to produce, in the best possible way, everyday objects in common use rather than working for an elite. In other words, he supports production for all, rather than just for restricted groups.

Totterdill (2002, p. 72), in turn, states that the profile of the designer must be related to his ability to work as an R&D manager whenever associated with project development departments. In addition to designing, he is therefore responsible for creating and developing prototypes for new or improved products and for ensuring that this choice also involves the use of the most suitable raw materials in order to guarantee product quality.

However, the profile of the designer cannot be discussed without listing the set of skills which it encompasses. Frequently, the concept of the skill is associated with a

high standard of performance or qualified performance (Cabral-Cardoso, Estêvão and Silva, 2006, p.11).

A study by the ANECA[1] refers to several groups of skills included in the description and identification of professional designer profiles in various specialist areas. However, the study also refers to another group of skills which, in the present-day context, are particularly important, namely business skills. Thus, the study stipulates that the profile of the designer must include a knowledge of business dynamics and the economic context, emphasising the importance of design at this level: "*design improves the company's innovation and communications policy, (...) the overall results of companies, (...) it is a profession that creates value on a macroeconomic level, (...) it improves a country's level of competition in relation to other countries (...) it favours technology transfer (...) and can help restructure an economic sector within a regional economic policy"* (ANECA, 2004, p. 422). This definition stresses certain objectives that are presented as the basis of the professional profile of the designer and which must be achieved by the end of a higher education course in design. From amongst these, a group of skills may be extracted that are directly associated with company-related activities, which will be presented as "business and professional skills".

By categorising the various perspectives and approaches analysed, the skills which make up the specific group of business and professional skills for designers can be identified (see Table I).

Table 1 – Designer business and professional skills

1.1 Ability to analyse and understand company/client characteristics and operations, their market strategies, commercial objectives and profit-earning capacity.
1.2 Ability to integrate company/client circumstances within the context of global and specific markets.
1.3 A systematic overview of company operations.
1.4 Competence in establishing market strategies within the context of projects developed.
1.5 Competence in selecting market segments and developing an appropriate image for a product/brand/company.
1.6 Ability to interpret socio-economic trends and consumer behaviour
1.7 Ability to analyse influences and define criteria to be considered within the context of the

[1] *Agencia Nacional de Evaluación de la Qualidad y Acreditación*, (National Agency for Quality Assessment and Accreditation), Spain

company.

1.8 Ability to communicate proposals, briefings etc. effectively to the company/client, orally or in writing.

1.9 Ability to provide the company/client with clear information on style, functionality, safety and other aspects inherent to the specific nature of their intervention.

1.10 Ability to work/plan taking the international context into consideration.

1.11 Ability to visualise information and convey information visually .

1.12 Ability to comply with deadlines and established budgets.

1.13 Competence in the supervision, construction, manufacture and production of a design product.

1.14 Ability to work as part of a team and coordinate and/or work in multidisciplinary teams.

3 Methodology

This study involved carrying out a series of operations to gather and process data. Primary information was gathered from a questionnaire administered to graduates and professional designers working in the specialist areas of Textile and Fashion Design and Equipment and Interior Design. The entire process of designing and producing and the instruments used to collect the information was the result of research, analysis and the processing of information gathered during the bibliographical review which preceded it, using the method described by Hill and Hill (2005).

The universe of designers in the specialist areas under analysis was defined by using the APD[2], AND[3] and CPD[4] databases, from which a total of 200 professionals were identified. The questionnaires were distributed to all the individuals in this universe by email and the replies obtained in the same way. The sample, which consisted of 70 designers representing 35% of the universe, was obtained by applying the convenience sampling technique, in which those who indicated a willingness to collaborate after being contacted were considered for the study.

The respondents were asked about their level of acquisition or development and the importance of the business and professional skills listed, using a scale ranging from 1 to 5, in which 1 corresponded to “weak” or “non-existent”, 2 to “inadequate”, 3 to

[2] *Associação Nacional de Designers* (Association of Portuguese Designers)
[3] *Associação Nacional de Designers* (National Association of Designers)
[4] *Centro Português de Design* (Portuguese Design Centre)

“average”, 4 to “good” and 5 to “high” or “acquired or mastered in full”. Assessment of their level of skills acquisition was registered in three different contexts: on completion of education (graduation), during professional life and in the medium/long term (horizon 2015).

The questionnaires were submitted to statistical analysis and processing, using the SPSS program.

4 Presentation and analysis of results

Characterisation of the sample

The sample consisted of 70 designers, 57.8% of whom were male.

With regard to the year in which they completed their courses, 71.8% graduated between 2000 and 2008, and 19.7% between 1995 and 1999 (Figure 1).

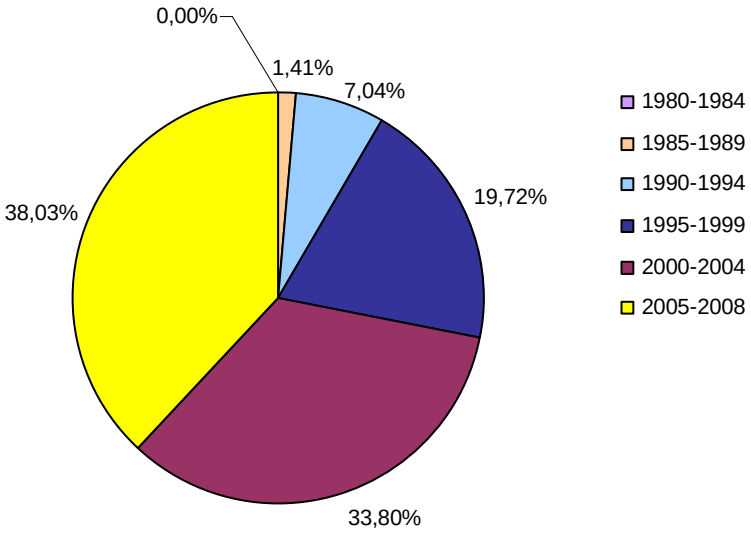

Figure 1 – Year in which respondents completed licentiate degree

When questioned about their professional background, 60% of the respondents stated that they worked in private companies, 11.7% in the public sector and 28% did not answer the question.

Levels of acquisition or mastery of business and professional skills

From the averages for the responses to the questionnaire, presented in Table I, and an analysis of mean variations (Figure 2) it can be observed that on completing higher education courses only two skills, "Ability to visualise information and convey information visually" and "Ability to work as part of a team and coordinate and/or work in multidisciplinary teams" registered averages of over 3, although lower than 4. Four skills registered averages of less than 2 and the remainder fell between 2.09 and 2.87.

The business and professional skills of the designers increased substantially during their professional life, with none of the skills registering an average of less than 3, and two reaching averages of over 4 ("Ability to comply with deadlines and established budgets" – 4.06 and "Ability to work as part of a team and coordinate and/or work in multidisciplinary teams" – 4.17).

Views on future demands associated with business skills showed a considerable rise in averages (4.77), with 10 of the 14 skills listed registering averages of 4.70 or more.

The standard deviation, as shown in Table II, is over 1 in terms of the skills acquired during education and in a professional context, but less than 1 in relation to the perspective for future demands on performance, reflecting a greater consensus amongst respondents with regard to the need to develop existing skills.

Table II – Averages and standard deviation for designer responses to levels of acquisition, development or importance of business and professional skills

	Skills	Average			Standard deviation		
		A	B	C	A	B	C
Business and professional skills	1.1 Ability to analyse and understand company/client characteristics and operations, their market strategies, commercial objectives and profit-earning capacity	1.67	3.67	4.74	1.44	1.17	0.50
	1.2 Ability to integrate company/client circumstances within the context of global and specific markets	1.75	3.75	4.84	1.44	1.03	0.44
	1.3 A systematic overview of company operations	1.43	3.76	4.57	1.41	1.07	0.74
	1.4 Competence in establishing market strategies within the context of projects developed	2.09	3.35	4.57	1.37	1.03	0.72
	1.5 Competence I selecting market segments and developing an appropriate image for a product/brand/company	2.58	3.62	4.83	1.21	1.21	0.62
	1.6 Ability to interpret socio-economic trends and consumer behaviour	2.38	3.72	4.84	1.64	1.18	0.44
	1.7 Ability to analyse influences and define criteria to be considered within the context of the company	1.71	3.43	4.25	1.43	1.06	0.96
	1.8 Ability to communicate proposals briefings, etc. effectively to the company/client, orally or in writing	2.61	3.71	4.86	1.25	1.24	0.43

	1.9 Ability to provide to company/client with clear information on style, functionality, safety and other aspects inherent to the specific nature of their intervention	2.64	3.68	4.81	1.33	1.23	0.60
	1.10 Ability to work/plan, taking the international context into consideration	2.54	3.35	4.80	1.54	1.17	0.50
	1.11 Ability to visualise information and convey information visually	3.58	3.96	4.83	1.33	1.29	0.45
	1.12 Ability to comply with deadlines and established budgets	2.87	4.06	4.91	1.15	1.19	0.33
	1.13 Competence in the supervision, construction, manufacture and production of a design product	2.74	3.67	4.93	1.30	1.16	0.31
	1.14 Ability to work as part of a team and coordinate and/or work in multidisciplinary teams	3.17	4.17	4.96	1.37	1.15	0.21

Key:
A – On completion of university/polytechnic school training;
B – Throughout professional life;
C – Horizon 2015.

As Figure 2 shows, the contribution of higher education design courses to the acquisition of business and professional skills does not reach an adequate level and these skills are mainly acquired in a business environment. However, the respondents considered that in the near future their level of mastery will no longer be adequate, since their performance will be required to reach very good or excellent levels.

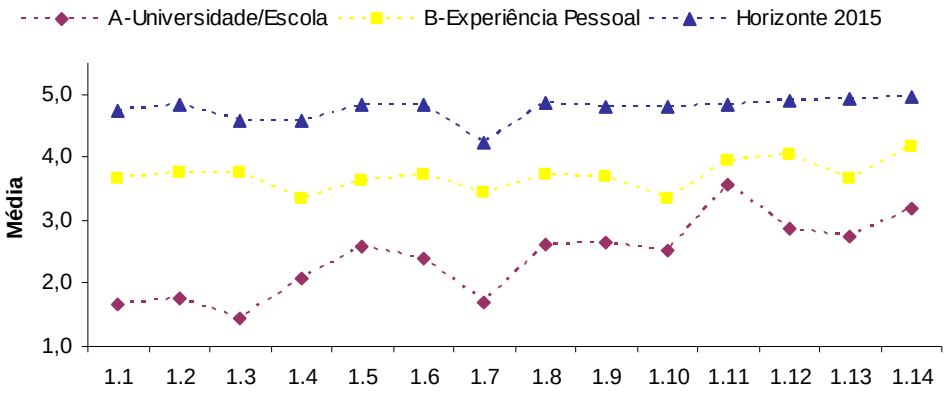

Figure 2 - Analysis of mean variations for level of acquisition, development or importance of business and professional skills

5 Discussion of results

The difference registered between the averages for the acquisition or development of business and professional skills during education and in a business context shows that higher education design courses in Portugal do not pay sufficient attention to these skills. Although some skills, such as the "Ability to integrate company/client circumstances within the context of global and specific markets" are typically acquired

through professional experience, others, such as the “Ability to communicate proposals, briefings etc. effectively to the company/client, orally or in writing” or the “Ability to interpret socio-economic trends and consumer behaviour” may be a focus for learning within an educational context. It can therefore be seen that the skills which allow graduates to integrate into the world of employment and enable them to carry out their work within a company to a high standard are significantly lacking within the range of skills that define the profile of the design graduate.

There is an even higher differential for levels of skills acquisition on completion of courses and the levels designers will face by 2015, according to the views of the respondents. By 2015, if there is a significant increase in the level of demands for performance in each of the skills listed and if education still fails to fully accommodate itself to the business and professional skills required, future design graduates will face serious difficulties in integrating into the world of employment.

6 Conclusions

Gradually, businesses are placing more value on the fact that they can count on incorporating design professionals into their organisations who are able to participate in defining their respective strategies, in collaboration with multidisciplinary teams.

The designer will not only be required to display technical skills, mastery of the methodologies required to execute and complete projects and a knowledge of appropriate manufacturing methods for the products they design. They will also be required to show a mastery of skills relating to the study, analysis and knowledge of markets, marketing strategies and the analysis of brand logic, in addition to all the skills associated with their integration into the business environment, which are reflected in a knowledge of the organisational structure and operations of the company in which they work.

The designers who responded to the questionnaire emphasised that the greatest gaps in their training related to mastery of business and professional skills, which represent the relationship between the designer and the company/organisation, ranging from the presentation and development of an idea, based on market studies and trends, to the production of technical specifications and supervision of the entire process of executing a project.

The skills which relate effectively to the ability to analyse and understand the characteristics, structure and functioning, as well as the strategies and influences on companies and clients, and those which imply knowledge and study of the business context, markets, trends and the behaviour of consumers for whom projects are developed, are referenced by the main international design organizations, such as the ICSID[5] and the BEDA[6], and by various researchers. These skills are identified as the ones which are either not acquired or are poorly developed within an academic context and are becoming a cause for concern in terms of designer training.

As a consequence, the initial preparation for business and professional skills should be extended within higher education, to reflect their importance to businesses, which are increasingly seeking to incorporate design graduates within their teams in order to confront increasingly high levels of competitiveness in the global market.

The employability of future graduates therefore involves mastering skills which, at present, are lacking in their training. In fact, to date, it is during their professional working life that designers are confronted with the realities of the business world and it is only during the exercise of their profession that they develop skills associated with a knowledge of business, organisational and market structures, marketing, etc.

It is important to bear in mind, however, that schools cannot and will not be able to meet all the learning needs of their students, the design graduates of the future. If four years of training was insufficient, the reduction of the study period to three years has made the situation worse. Obviously the spirit of Bologna does not imply that this period should be reduced but instead that conditions should be created to ensure that many, preferably all, graduates continue their studies and complete the 2nd. cycle. Some skills must necessarily be developed during the 2nd. cycle of training, since they need to be structured on the basis of previously acquired skills or imply a certain maturity/experience in mastering methodologies and/or technical or mental processes.

Business and professional skills, since they imply an understanding of the specific nature of organisations, can only be fully mastered in a business context. However, higher education must not fail to provide graduates with an adequate preparation in

[5] International Council of Societies of Industrial Design
[6] Bureau of European Design Associations

this area and it is therefore confronted with the need to develop teaching/learning strategies to enable students to understand the realities of the business environment.

Bibliography

Alencar, Marcelo S., et all 2005, Comunication Systems. Springer Hardcover

ANECA 2001, Libro Blanco 2001. Madrid: ANECA.

BEDA 1975, Revised statement on the design profession as agreed in London, 22/23 November, BEDA Leaflet, 19xxx:14.

Bertola, Paola 2004, "Design as a research tool: New chances for design competences", In Design Issues in Europe today, BEDA, pp. 41 – 47.

Bessa, Daniel & Vaz, Paulo 2007, Um contributo para um Plano Estratégico para a Indústria Têxtil e do Vestuário Portuguesa. Vila Nova de Famalicão : ATP – Associação Têxil e Vestuário de Portugal.

Cabral-Cardoso, Carlos, V. Estêvão, Carlos & Silva, Paulo 2006, Competências Transversais dos Diplomados do Ensino Superior. Guimarães: TecMinho/Gabinete de Formação Contínua.

Hill, Manuela Magalhães & Hill, Andrew 2008, Investigação por questionário. Lisbon: Edições Sílabo.

Loyens, Dick Gerard & Robert, Celina, 1995, 1997, Educação em Design e Criatividade, Thesis for Masters in Industrial Design, Faculty of Architecture, University of Porto, Porto.

Monally, Norman 2004, "Design education in the 21st Century", In Design Issues in Europe today, BEDA, pp. 48 – 50.

Munari, Bruno 1990, Artista e Designer. Lisbon: Editorial Presença.

Potter, Norman 1999, Qué es un Diseñador: objetos. Lugares, Mensajes. Barcelona: Paidós Estética 24.

Totterdill, Peter et all 2002, Tendências do Sector Têxtil e Vestuário. Implicações nos Perfis Profissionais e na Formação. Guimarães: TecMinho, Associação Universidade Empresa para o Desenvolvimento.