AN INTEGRATIVE APPROACH TO GRAPHIC DESIGN EDUCATION

THE BAUHAUS TRADITION

Arguably, the Bauhaus made the most important contribution to design education in the 20th century. Its tradition was carried on by Swiss schools, most notably Zürich and Basel, and later on by the Hochschule für Gestaltung, Ulm (Ulm School of Design) in Germany, which in turn became a model for most design courses in West Germany.

Having received my education at the Ulm School and experiencing quite different traditions of design education in the U.S. and Britain, I have reached a point at which I feel a need to re-assess the Bauhaus heritage which still forms the basis for many mid-European design courses.

The following five points of criticism are the basis for an alternative approach to design education such as it has evolved in my educational work over the past few years:

1. Most post-Bauhaus courses focused on «form» and «design» at the expense of «communication».
2. With the Bauhaus/post-Bauhaus preoccupation on «form», another vital constituent of design education has been neglected: the student and his or her professional perspective.
3. The Bauhaus philosophy was based on the concept of integration. Yet post-Bauhaus institutions have often sacrificed this in favour of specialisation.
4. The Bauhaus masters were pioneers in developing an elementary visual language. But in the hands of the second and third post-Bauhaus generation this was eventually degraded into a formula, an unreflected adoption of styles, patterns and terminologies failing to reflect present day realities: new media and a changed visual literacy.
5. The Bauhaus Foundation, with its introduction to basic «disciplines», its didactic exercises and its hierarchical structure may have been a major achievement at the time of its evolution. But today we have a different understanding of adult education and the learning process. The demands on the profession have changed as well. In this light, the Bauhaus has ceased to be a model for Design Foundation.

DEFINING OBJECTIVES

The educational philosophy of the Bauhaus centred around the structure of a visual language and its grammar. It was form-orientated.

It is my view that at centre of design education there should not be a dogma of Good Form, but the student in the context of the learning process. Therefore the concept I am presenting here is student-centred.

I start by determining *operational* goals; my educational objectives are defined in operational terms as *activities*: the things which I expect students to be able *to do*. I shall define objectives in four different areas:

- skills,
- methodology,
- knowledge,
- sensitivity.

Skills pertains to all aspects of manual dexterity with tools and equipment, the mastery of technologies, the ability to operate basic machinery, the facility to use and transform materials, the understanding and competent use of certain media technologies (such as cameras, copiers, video etc.).

Methodology covers a person's gradually evolving individual style of work, a structured approach to problem solving, the ability to plan, structure, and evaluate one's working process, a way of blending systematic experimentation with intuitive thinking, and the ability to organize oneself and others in the process of division of labour.

It is evident that Methodology, as the previous point, skills, is an area in which no two students have an identical profile; every student will develop an individual mix of methodological abilities.

The third area, *knowledge*, has in the past basically consisted of the history of Art and Culture, with a bit of communication theory on the side. (Yet, for young designers who will graduate at the turn of the millenium a more profound understanding of the interdependence of society, politics and the world's economic and ecological balance will be essential.)

An awareness of the design profession and the role of the communicator in the media industries are other important facets of knowledge. In operational terms: how does the student get access to information and expertise, how does he/she deal with question of business practice and management etc.

Finally, *sensibility* may be defined on three levels: First of all, it pertains to the designer's «feel» for aesthetics, a sense of «style» and quality. The term *sensibility* may also be interpreted as sensitivity towards pressing issues, an awareness of social or individual problems, an appreciation of *Zeitgeist*, a keen interest in culture and society. Finally, the term *sensibility* may also be used to describe a student's evolving ability to discriminate, to develop a set of values and a sense of judgement.

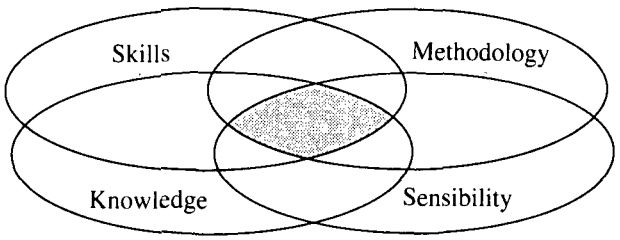
In each of the four areas mentioned I will arrive at a list of detailed objectives. Usually, in the next step, once the objectives are defined they would be translated into separate course formats, e.g. skills in workshop courses, methodology in seminars, knowledge in lectures, skills and sensibility in studio work.

However, it is a fallacy to believe that, without coordination, all of these disparate courses, presented by different people, would form a meaningful synthesis.

It is therefore important to remind oneself that the idea of integration (not separation) of these four areas is at the heart of the design profession. Which, applied to education, means: A design course should aim to combine constituents from all four areas (skills, knowledge, methodology and sensibility) in project work, indeed, in every single project.

This, then, is the idea: to develop a set of *operational*

goals in each of the four areas, which define what a student is expected *to do*. Next: to devise a succession of projects, and to assign to each project a composite of objectives from the different areas, possibly from all four, so that a meaningful synthesis is achieved.



Take these two examples:

I can teach drawing as drawing, isolated from its context, its application or its function as a communication tool. Alternatively, a storyboard assignment allows me to integrate a number of aspects: together with representation skills (scribbling, drawing, visualising) I may introduce methodological aspects of creating a narrative by editing and sequencing images. And as far as knowledge is concerned, this project allows me to introduce the theory of cinematic montage and aspects of the history of film-making. With respect to sensibility, the project is an opportunity to compare the different visual languages of films, videos and comic strips.

It is obvious from this example that the aim of such an assignment is not the ability to produce storyboards as an end-result but to use «storyboarding» as a vehicle for the purposeful combination of learning objectives on four levels.

Another example: I have organised my project «Statements on Typography» so as to integrate the following educational objectives:

skills: typographic sketching and reproduction technologies;

methodology: structured experiments with different weighting of a finite number of typographic variables: size, weight, emphasis, position, sequence, hierarchy;

knowledge: statements on the impact of the various media technologies on design;

sensibility: an introduction to the history of 20th century typography which aims to encourage further individual research projects.

THE EDUCATIONAL MENU

This framework for course planning I call an *educational menu*.

It developed at Humberside College when we re-designed the First Year structure of the Visual Communication course in which tutors from all four specialist areas of study provided projects which were so elementary as to benefit either area of specialisation. For instance, a storyboard project in General Graphics gave a headstart into animation, but it also encouraged illustrators to look into comics or enabled photographers to develop shooting-scripts. Similarly, a documentation project in Illustration was a welcome preparation for documentary work with different other media, photography and film etc.

The integration of theoretical subjects in the studio assignments proved to be a lot more difficult, it involved a slow process of getting academic staff to accompany studio projects and studio staff getting used to academic discipline.

We soon discovered that the sequence of these projects did not matter so much. What really mattered was the fact that staff had come to consensus on mutually acceptable objectives and that students understood these objectives in the perspective of the various course options.

In describing this approach I use the word *menu* in its double meaning quite deliberately.

Firstly, in the «What-you-see-is-what-you-get» world of the Macintosh computer, a menu is a list of possible choices, intelligible to all users, which, if you re-translate this into the world of education, supposes that all users, tutors as well as students, always have an overview and understanding of the whole programme and are fully aware of the further options of the entire course: students know which items on the menu they have mastered, and which additional ones they need to explore; tutors make sure that all essential points on this menu are covered at one time or other during the course.

Secondly, I use *menu* in its original, gastronomical meaning: The word suggests that there is a group of hungry people waiting to be satisfied, though folks with different appetites, tastes and capacities. And there is the part of the cook (le chef) who makes up dishes with varying combinations of different ingredients that are in season, coming up with balanced meals which not only feed his patrons but also tickle their palates and «cater» to their individual sense of taste.

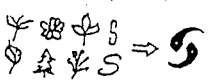
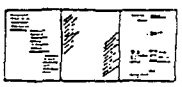
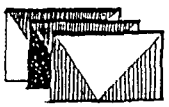
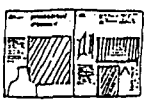
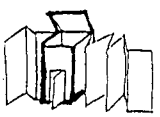
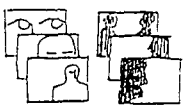
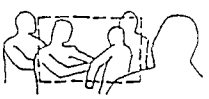
Now, getting serious again, here is, as an example, a menu of a Basic Course in Graphic Design (see illustration). In the first column you find the operational objectives for *methodology*, which form the core of the assignments. These are the basic operations a student is expected to master. The second column lists relevant *skills* subjects pertinent to these particular assignments, and the third features relevant *theoretical* subjects (covering knowledge and sensibility).

(Needless to say that a menu for the Second or Third Year of a course would have to contain different, more complex items.)

PROJECT WORK. A HOLISTIC APPROACH

There may have been good reasons at the Bauhaus to separate «Foundation» (or the «Basic Course») from the Main Study area. But since the thirties our world has changed significantly, and today a Bauhaus-type foundation year (or, in some colleges: two years) is a luxury we cannot afford anymore.There is too much to do and so little time to do it in, and we must not keep our students away from practical experience for an entire year (or two). It makes little sense to engage them in one-dimensional, detached and «value-free» exercises for such an extended period, when in fact most of them come to college enthusiastic and itching to work.

Philosophycally, it may have been sensible to start a

		Skills involved	*Relevant theoretical input*
1. Visualisation (activity: simplifying)		Illustration Representation techniques General graphics Creativity	Semiotics History of Visual Communication
2. Structure (activity: editing, arranging)		General graphics Typography Repro technologies DTP Computer	Design theory Legibility/Perception History of Typography Linguistics
3. Hierarchy (weighting/ranking)		General graphics Typography/Photography Repro technologies	Theory of perception Legibility readability History of Design
4. Emphasis/Colour (accentuating)		Repro technologies Printing technologies Typography General graphics	Theory of perception Colour theory Colour systems Gestalt Psichology
5. Grid Systems (structuring, relating)		Typography/Photography Representation techniques General graphics DTP Computer	Design theory History of Design Typographic systems
6. Identity (serialising)		General graphics Typo/Photo/Illustration Representation techniques	Gestalt Psychology Design theory History of corporate communications
7. Inventory (collating/constructing)		Creativity Engineering Materials & technologies	Technologies Engineering principles Material properties Design generics
8. Narrative (storyboarding)		Illustration/Photography Animation Creativity	Psychology of Perception Film theory Readability
9. Documentation (reporting)		Photo/Video/Graphics Planning Writing Representation techniques	History of Mass Media Communication theory Journalism Socio-Cultural Issues
10. De/Montage (experimenting)		Creativity Repro technologies Mixed media Engineering	Theory of creativity Cultural History History of Design

Heiner Jacob. Educational Menu. Graphic Design Foundation.

course with the gradual development of an elementary visual language before allowing students to put these elements together. But to many, this building-block approach is a very stupefying, de-motivating experience.

And it is simply not the way people learn. In my observation practically everyone learns best in context, by reacting to real-life situations, indeed, complex situations with a number of interdependent variables. This is how children learn to play ball, how adults get into a foreign language, how you and I learn how to operate a video camera: it is learning by doing and, more to the point, learning in context. I have come to call this *holistic learning*: starting from a general picture and then moving on to specific aspects, proceeding from the whole to the detail, not the other way around.

This holistic concept of learning calls for an abolition of the post-Bauhaus basic course as a series of detached, out-of-context exercises, or at least it would require a re-assessment of the function and value of exercises in a course. It also puts project work into a new perspective; it is my firm conviction that we cannot start with project work early enough.

INTEGRATION

Integration has been at the heart of the Bauhaus philosophy, an integration of Art and Technology, of the craftsman and the designer and, consequently, of the workshop and the studio. Even more importantly: an integration of theory and practice. Whilst the Bauhaus attempted to bring all of these elements into synthesis, the second and third-generation institutions which were modelled around the Bauhaus concept allowed specialisation to take over and, with it, a division between once integrated activities. Unlike the Bauhaus, whose teachers were truely interdisciplinary, many schools in the Bauhaus/Swiss/German tradition have today diversified specialist staff teaching either in the studio, the workshop or the lecture theatre, with timetables which help cementing these divisions.

What is then called for is a new effort to re-unite the various contributing sources in education, in plain language: to create learning situations in which the master craftsman, the designer and the academic can join forces and contribute to a project.

Integration is also necessary on another level. The terrible rift between Basic Course staff (Year One) and Main Studies personnel (Years Two, Three and Four), as I have experienced it at many colleges, is counter-productive. It makes no sense to me when Basic Course staff expect from students an attitude free from utilitarian thinking, thereafter Main Studies staff demanding that students should be able to solve problems and satisfy demands. What is in question here is neither the need for preparatory skills and methodical exercises on one hand nor the importance of goal-orientated problem solving on the other. But the rigid separation between «Basic» and «Project» studies, as instituted in the course structure in many schools, needs to be overcome. I suggest to integrate the «exercise» constituents into the early stages of each all projects. Thus, «Foundations of Graphic Design», rather than taking up an entire year, would accompany, in small increments, the project work from the first year to the last with relevant aspects of skills and methodology «plugging» into respective projects.

THEORY

Many students of design are people with a physical intelligence who prefer using their hands rather than their brains. They frequently lack the structured discipline of a scientific mind; they have a heightened awareness on the visual side and whilst their power of imagination is way above average their literate and numerate capabilities are not. Which all boils down to this: design students often resent Theory. And the teaching of theoretical subjects, or rather, the integration of theory into design education is a crucial problem. My own attitude towards this problem has taken several turns over the years:

– From *theory versus practice* in my education it changed to
– *theory before practice* in my first work as an educator, and today I have arrived at the conclusion
– *theory through practice*, or, more precisely: practical design work as a basis for an interest in theory.

I shall explain:

I graduated from the Hochschule für Gestaltung, Ulm (Ulm School of Design), where theoretical subjects formed one half of the course load. However, due to planning and scheduling problems, the course was rigidly divided between «studio» (design) weeks and «theory» weeks. Almost anyone subjected to this patterns for longer periods of time would come to view practice and theory as totally separate from each other (in shorthand: *theory versus practice*). This made no sense to me.

So, when I began teaching Graphic Design, I started attaching relevant theoretical subjects to specific design projects. I put great amounts of theory into the briefing stage, and in the course of the project I allowed the theoretical input to be gradually replaced by the students design output. The formula for this is *theory before practice*, or in other words: You can produce intelligent work only if you are intellectually well-prepared. This worked relatively well with many students. But I discovered that not all have the same *need* for theory, their ability (and willingness!) to absorb theoretical subjects depended on my ability to motivate them how to make use of research, knowledge, information etc., and this was a matter of careful timing.

That is why in the past few years I have come to deal with theory in a different way: I start most projects without any theoretical input, waiting for the design work to evolve, and I bring in the theory whenever the need arises in the course of the project: when problems occur which call for explanations, when more information or, rather, more specific information is required, when students get stuck and when helplessness or curiosity necessitates research, when decision-making calls for stringent criteria, when more background is needed as a stimulus for fresh ideas etc., in short: when theory proves to be useful. To this end I have defined a menu of theoretical subjects and academic disciplines but

without a fixed hierarchy. From this menu I allocate items to each project under way (with some anticipation I can prepare the subjects most likely to be required as an underpinning for the work-in-progress).

The problem with this approach is that you need academic staff who react immediately and flexibly to project needs, staff who are alert enough and willing to provide various specific subjects and methodologies whenever a project calls for it. Which also implies: staff willing to participate in practical project work.

Integrated design education, in this sense, ensures an integration of practical and theoretical work centred around projects which are taught jointly by studio and academic staff, with theoretical subjects directly related to a project context.

TIMING

Of course the Bauhaus people had a good point when they proceeded from the simple to the complex. That should not change with project work. For instance, it is not advisible to invite students with widely different qualifications to participate in a complex project, first year students as well as diploma students. First year projects need to be devised around few, manageable variables, as many as students can handle at that stage. These projects may be relatively short; it is a boost to a student's confidence when he/she experiences the successful completion of a project. The repeated sense of achievement gives the student the self-assurance to tackle bigger, more complex problems with new or additional variables. It is a matter of the right challenge at the right time.

In this respect, timing is crucial. It is the educator's skill of observation and his/her ability to find the right «dosage» of variables which determines how much a student can cope with at a particular stage of the course.

The length of projects is another aspect of timing. Projects without clear deadlines are usually doomed. Deadlines are non-negotiable and as educators we must not allow ourselves to extend any project, fascinating as it may be, ad infinitum. In my experience, projects which carry on for too long loose momentum and produce, after and exciting start, rather tedious and uninspired results. It is therefore the role of the educator to time projects in such a way that they are manageable, yet a sense of urgency should be maintained throughout. I make a distinction between «intensive» (short-term, high-energy) and «extensive» (long-term and time-consuming) projects. An intensive project may last a mere two days when the central issues are spontaneity, creative thinking and improvisation. An extensive project may last eight weeks or more and concentrate on thoroughout conceptual groundwork, detailed alternatives and competent execution, this time perhaps at the expense of «flair», «fun» or «energy». The scheduling of intensive versus extensive project periods is an important facet of course planning, and the careful timing of these is a key condition for the student's optimal development.

COORDINATION

It is one thing to devise a curriculum as a succession of topical projects, each of which based an a composite of educational objectives, and to demand that staff from different backgrounds contribute flexibly to the changing demands of project work. But making it work, is another matter —a seemingly herculean task.

First there is the question of the composition of staff. With regards to staffing policy I give preference to people with an inter-disciplinary attitude, persons who do not insist on their «academic freedom» to teach whatever they see fit, and people with flexible timetables, not tied up by too many outside commitments.

An integrative approach also requires individuals willing and able to cooperate with each other, staff who can engage in team-teaching and who have educational packages prepared and ready at short notice.

Another important point is a schedule which allows for:

a) overlaps of staff time between the studio, workshop and academic staff regularly during particular days of the week,

b) a term, structure which sets clear stages for the length of projects.

In practical terms: Only when all staff work to the same rhythm (e.g. a structure of 1 + 4 + 1 + 4 + 1 + 4 + 1 weeks per term), only when it is agreed that all projects start and terminate in the same scheduled time slots, can individual staff members make commitments to specific projects and change over from one project to the next.

This approach puts additional demands on the course leader: He/she not only has to plan a whole term's projects way ahead of time (objectives, topic, format and staffing), that person also has the job of coordinating the staff without whose cooperation this scheme will not work and to referee between conflicting interests so as to make the most of all available resources.

Which brings me to my final point. Most design courses, compared with other areas in education, have fairly abundant resources: expertise, equipment, materials, ideas, spaces, personalities, philosophies, money, not to forget: a great student potential. But usually many of these are separated by egotism, sloppiness or bureaucracy. That is why so much of design education is wasteful.

However, based on a sound educational concept, with planning and skilful management we ought to be able to make the most of our resources.

RANDOM NOTES ON GRAPHIC DESIGN EDUCATION

These notes were written to complement the essay *An Integrative Approach to Graphic Design Education*. They are deliberately personal and anecdotal so as to illustrate the essay's more theoretical points.

Rather than drafting a manifesto on Design Education, I have collected a few notes on my own teaching experiences. I am indebted to John Cage, the experimental composer, who found that anecdotes would better highlight his ideas than lectures or essays.

1. In my basic course I have a brief exercise in structuring text. The first results were exciting. Then, repeating the assignment in consecutive terms, albeit with different material, routine crept in. I suppose, as the assignment was not exciting for me anymore, this lack of enthusiasm rubbed of on my students, most of whom produced uninspired work. When I get bad, students get worse. But when I feel good, students get better. The educator is an amplifier of student resources.

2. All of my assignments are carefully written out as a brief. All students get their own copy, on an A4 page I am stating the assignment itself, the deadline, and the criteria for this job (of course I am using these same criteria and no other in the crit!). Thus the project brief is like a contract between myself and the student, both sides work to the same rules and deadlines, there is hardly ever any discussion, over a particular solution, as to what works and what does not, as all can be judged against the given criteria.

3. The most important point about the brief: I always demand more than one solution, usually three, sometimes four alternatives. I want my students to get used to the idea that there is always more than just one solution to any given problem. For instance, I tell students I want one solution which concentrates on form and aesthetics (at the expense of everything else), another solution to concentrate on content (the «form follows function» bit), a third which strikes up a sensible balance between the playful and the functional, and a fourth, a free style version, in which I expect the student «to break all the rules». Students often ask me «What do you mean with *free*, how free can I get?» My reply: «I do not want to see anything I could have thought of, or done, myself. Get adventurous! Surprise me! Stun me!» Usually, a few weeks later, we are all stunned, most of all the students who did not expect they could go this far.

4. Graphic Design students have a pen mind and an A4 scope. I must push my students off the edge of the sketchpad into unknown dimensions. On occasion I have to wrestle the pen out of their hands so that they can discover the knife, the camera, the spatula, the keyboard, the screwdriver, materials familiar and strange.

Often, on a typographic project, we will start with letters on paper and end up building objects, devising projections, etc.: explorations in space and time.

5. On the issue of mistakes, blunders, mishaps etc.: I keep telling my students: «There are no mistakes. There are only fit or unfit solutions.»

Take, for instance, images from a faulty photocopier, they can be the source of new ideas. What is a nuisance today may turn out as fresh, new imagery in a different context tomorrow. Some of my best ideas developed from previous «mistakes».

6. For many years I have been struggling to free myself from the restrictions of my own education. Now I love to see my students do things I was not allowed to do in college.

7. Timing is crucial. All assignments in my basic course are short, usually not exceeding three weeks (with one, two or three days work per week). I structure the brief so that a maximum can be achieved in a minimal time span. The more often students experience the satisfaction of having mastered a subject, the more confidence they gain for future work. Gradually, they learn to structure projects themselves.

8. Every student gets individual material to work with (which implies a great deal of preparation on my part). This is for two reasons: first of all, different material produces a greater variety of results, so group crits get to be a lot more interesting. Secondly, as a practicing designer I, too, cannot choose my job but I have to cope with whatever problem is given to me. I tell the students that this is my professional reality, which they usually accept.

9. Why give students set briefs in the first place, when most educators allow them to pick a subject of their choice? It is a matter of time. I have seen students wasting a lot of time, weeks or even months, mulling over the choice of a subject close to their heart —valuable time is lost. That is why I usually pass set material, pre-selected images and texts, on to the students. As I determine the right «dosage» of variables for each assignment, I am narrowing down an initially complex design problem to a limited number of choices that the students can manage to handle at that particular stage of their development. Thus they can concentrate on problem-solving. This is a short-cut to productivity.

(Later on I need to find the right balance between set briefs and self-induced projects.)

10. My First Year Graphics students in Hull had to do a storyboard assignment (developing the visuals for a film sequence after a screenplay or a pop song) within two weeks, an extremely short time span. They had to work very hard, but all of them coped with this toughest of all assignments, they even enjoyed it! I am convinced that students grow with their challenges.

11. Weeks after the storyboard assignment a student tells me: «After that project of yours, watching movies will never be the same again. As I am watching a sequence I keep thinking: "That's clever, but I would have done that differently."»

Or after a project on lettering in our urban evironment: «As I am walking down my street I keep seeing things that I have have never realised before, things that start popping up in my work...»

12. A key aspect of Communication Design is *communication*. Being articulate and successfully communicating one's ideas and one's work to others is an essential quality I expect every designer to have. From the start of the First Year my students have to get used to presenting their work to the class. Sometimes I videotape the student presentations as well as mine. Then I review and scrutinise my own presentation (instead of theirs), which they love: I spare them individual embarassment while I admit to all mistakes I have made on behalf of someone else.

Another aspect of presenting is the preparation of a portfolio together with mock interviews. I tell my students what a prospective employer told me after I asked him what he wanted to see: «Bring whatever shows you in your best light!»

13. I often start a term by asking a student from the previous year to present his/her successful project to the new students. This is met with great interest: students have more credibility among other students than tutors. During the presentation I usually leave the room: I demonstrate my complete faith in the student's competence, and in my absence a more relaxed discussion will develop.

14. Finally, on the topic of presentations, presenting research work does not come naturally to a student, but it is a matter of practice. Last month, I spent four hours coaching a student for a lecture presentation on Design History. I was aiming for an hour's length —the first run took two hours. I criticised the presentation in great detail, making suggestions as to structure and focus. Another two hours later we were both exhausted. A week later, after careful editing, the student gave a spot-on and well-paced presentation which ran exactly 45 minutes. Individual tutorials like these are very time-consuming but worth the effort: the time I invest today I will save at a later stage, when the student has become more self-reliant.

15. Why I prefer group crits to individual tutorials:

Among the variety of all solutions on the pinboard I find it easier to point out critical issues, explain basic design principles, demonstrate functional criteria. By comparing the different results I am able to direct my criticism at the work, not the person.

I usually have scissors and glue, pen and paper ready so I can always demonstrate suggested changes on the spot.

The group crit has yet another advantage: students need to get used to working in teams. Discussing other peoples ideas, using these for one's own project, making new suggestions, indeed, supporting each other is a practice that takes time to learn. For that the group crit is an excellent vehicle.

Last year I suggested in mid-term to replace the group crits with individual tutorials; all protested: «We want to see what everyone else is doing. That is much more interesting!»

16. A documentation of course work can re-inforce the impact of a learning experience. At the end of a term I usually compile and edit student work. With the help of the photocopier it is relatively easy to produce a brochure in a small edition. For the students, who may otherwise view the course as ephemeral, it is a major achievement to see their own work «in print», as part of a programme; it is a boost to their confidence. While colleagues of mine insist that each student put together a record of their individual work, I prefer the composite class documentation. This contains the weeker as well as the stronger course work, it sets standards, and in its breadth it usually turns out to be a veritable compendium of ideas and styles.

17. While presenting a storyboard in class, a student got so excited reconstructing her narrative of a Ray Bradbury story that she broke out into uncontrollable laugther which carried all of us away for minutes. The background to this incident was revealed to me months later: being a dyslexic, the student had had great difficulties reading the five-page story. But then she discovered her talent and great ease with which she could tell stories in images. It was such a breakthrough for her that she was overwhelmed with emotion.

18. Another dyslexic almost failed to get on to the course in the first place; his portfolio was artistically unimpressive, the interview shambolic. Only upon a second glance we discovered papers that none of us had bothered to read, scripts of radio documentaries which had been produced for national radio. On a freak chance, and on a minority vote, we decided to take him. He turned out to be an excellent student and a natural animator with and ability to motivate other students. Despite his writing handicap, he produced one film-script after another, all in horrific spelling yet all excellent. He finally graduated with honours. His degree project: A documentary on dyslexia.

19. It is remarkable how the subject of Visual Communication appears to attract people with a handicap: I have had students with speech impediments, lack of stereoscopic vision, some were colour-blind, hard of hearing or dyslexic.

Maybe it is the case of the blind pianist: a deficiency in one area is compensated by a heightened sensibility in another. If I am allowed a further generalization, many of my Graphic Design students have one handicap in common: Compared with other faculties, they have sub-standard verbal skills, both in speech and in writing. It is then my turn to make them as articulate and eloquent as I can in another area, that of visual expression.

20. Visiting the Academy of Fine Arts in Warsaw I had a chance to see their end-of-year exhibition. The Academy was filled, wall-to-wall, with a year's work from all classes and all departments. The exhibition was public, it ran for a whole week (elsewhere in Europe you are lucky if the public or even other students are allowed in). Most remarkably, on the day of the exams, the professors presented the students' work to each other. Thus every professor had to stand judgement of their peers, and, by the same token, every professor got to know the year's educational standard. What a simple, brilliant idea!

21. Year after year, we are all re-inventing the wheel. Every college plans their individual curriculum, although at last most curricula turn out to be very similar, as do projects. Course planning is usually the work of a few dedicated people who get little assistance from their colleagues. Why is there so little communication on design education between design schools? Why is there so much fear of competition, so little interest in each other's work? Why is there hardly any exchange of projects and teaching material, experiences with educational experiments, discussions on professional standards and curriculum development?

When I made suggestions for an educational exchange network in the Seventies, this met with little interest. Today, with copiers, fax machines and computers all around us, chances are much better.

(I just discovered that the European Design Education Network EDEN, has been set up in Glasgow two years ago.)

22. One of my favourite plans: to start a magazine on Design Education Projects for tutors and students —inspirations from others who are teaching, results from those still learning...

23. When applying for a teaching position at a college in West Germany, I presented a concept how to coordinate a

degree course so as to make the best use of available resources. One of the interviewing committee asked me bluntly, «But, Mr Jacob, doesn't that mean much more work for all of us?»

He was right, and I knew I was out.

24. I must remember to keep notes on all student projects. Students will think I do not take them seriously if I get projects mixed up or if I cannot remember their names. Yes, I must remember to keep that notebook.

25. During an exam I defended the work of a student whose presentation had been erratic. Afterwards an older colleage, a man of renown, took me to the side: «You know, in this business of design some have got it and others haven't. This man is hopeless, there is nothing you can do about it.» I was furious. This «colleague» was receiving a fat salary for his job (which was: coaching young people) but he was simply oblivious to students' problems.

Another place, another time: Two students were about to be thrown off the course due to «laziness» and lack of motivation. Colleagues asked me to give them a last chance; I had a reputation of being the Social Worker of the course. I told the students what was at stake: their place on the course and my reputation. We agreed to meet every week to work together and we worked very hard, indeed.

A year later the two graduated with honours. As they told me afterwards, this had been the only time someone had bothered to work with them. And it was the first time they enjoyed college.

26. A college is no self-service restaurant, and a design course is no mail order catalogue.

27. My first successful educational project was an Intensive Seminar held jointly with Tom Ockerse at the Rhode Island School of Design (Providence, USA). It ran for three consecutive weeks, consisting of a day and a half per week of tightly scheduled activities, e.g. workshops, brainstorming sessions, presentations etc. requiring the full attendance of approx. thirty students and two tutors. These «intensive» periods were followed by three-day slots during which everyone worked at their own pace, at home.

Colleagues have criticised me for coining the term «Intensive Seminar» as they hold that all teaching/learning activities should proceed at a high level of intensity... But my experience is different. During an intensive seminar, a high level of energy is difficult to sustain, as difficult as it is to hold everyone's attention (remind yourself how few students are used to an 8-hours work day). As exciting as these intensive periods may be, one has to allow all students extensive periods during which they may reflect and digest, developing projects of their own interest, with tools and media of their choice, at their own pace, using their individual brand of creativity and concentrating on their own design work. While the *Intensive* Seminar provides the *breadth* of scope to a project, it can only scratch the surface of a problem. The *extensive* periods are necessary to give the project the necessary *depth:* the time-consuming, painstaking development of detailed solutions.

If it is true that creative work is a solitary activity then I claim it is also true that individual creative work gets a boost from an initial group brainstorming as well as it benefits from a concluding group crit. It is then the skill of the design educator to keep a productive balance between group activity and individual work.

28. The same goes for the planning of projects: A prerequisite for a productive course is a good balance between short, tightly briefed assignments with given material and tough deadlines, alternating with extensive self-defined students projects.

29. On attendance: As I carefully structure the succession of my projects I hate it when students show up at random. But you can only expect regular attendance if you make every single session very, very interesting.

30. When I teach typography I have to remind myself that most students take the course for credits, not out of interest. They frequently have a mental block against what they perceive as a stifling technical subject. I have to «self» them a subject which most of them resent. *I really have to seduce students into typography.* (Seduction is an erotic term. It implies passion on both sides.)

31. The adventure of teaching: when I set an assignment I have no fixed idea about the potential outcome. I love open-ended projects.

There is always the danger of failing, but without risk-taking there is no creativity.

32. For a book project I had selected some obscure texts by German Expressionist poets of the Twenties which I found strange yet intriguing. I had no idea if these would work with my students. Reactions ranged from «interesting, but strange», over «tough», «pathetic», «alienating», to «I hate them!» Unexpectly, the more my students came to hate the texts, their growing resentment generated a lot of creative energy, and the project got more exciting from one week to the next. It had been greater challenge to struggle with awkward, unfamiliar material than dwelling on a safe, attractive subject.

33. Some of my best students are housewives. Okay, I will explain:

Take Kate, for instance, who enroled in a Graphics course when she was in her early thirties, married, with a child of seven, having all the duties of a housewife with precious little time to herself. Travelling to college involved an 80-minute journey both ways. She came to project meetings well-prepared, expecting the same from her tutors. She would get impatient if classes started late or when lectures were cancelled at short notice. Her work was always intelligent and efficient; she usually produced a lot more than the other students. I assume that those people for whom going to college is a second chance in life, take studying very seriously. Being highly motivated, they often carry a younger student group along.

They are the no-nonsense students who keep everyone from getting too academic. Yes, some of my best students are housewives. Or people with a previous professional career. Or foreign students who live on borrowed time and money.

34. We are educating students who are often ahead of us. I do not see how we can restrict our teaching to the passing on of professional experience which will be outdated when our students start their professional practice. Many of my students today have a computer literacy which is way over my head, and many of them have media skills and access to so much imagery-producing equipment I could only dream of during my college days. We had better start looking forward to the needs and means of a changed society rather than dwelling on puristic design philosophies dating back to the beginning of this century. There ought to be room in our curricula to develop original concepts for design and communication in the 21st century.

35. At the request of my friend Heide I was lecturing on Design in the Sixties and Seventies to a group of high school kids, all of whom had been born after 1972. I soon realised the subject did not really touch them as they had not experienced the period themselves. The audience got animated, however, when I asked them to extrapolate the ongoing trends in design and fashion into the next decade: «How would you design a chair, a car or a walkman to make it really avantguarde-looking for 1995?» That really caught their imagination. But it was the end of the session and we did not have any sketch-pads in the room, either.

36. Most design students do not read enough. Or worse, they do not read, period. And the reading lists of design courses are still stubbornly limited to Art and Design (with «classics» such as W. Kandinsky, C. S. Peirce, W. Benjamin, J. Berger, E. Ruder, as if the design profession had not changed within half a century).

After leaving college, many designers are shocked to discover that people in their profession read *The Economist*, *Psychology Today*, *The Business Weekly*, etc. Why did not anybody tell them, in college? The design students' scope cannot be broad enough. As my friend Mario put it (Mario Minichiello, the British illustrator who teaches at Leicester), it is not enough getting your drawing right, you need to get into Culture!

37. At Humberside College (Hull, Great Britain) we had a habit of hand-picking our students in very time-consuming personal interviews. We did not necessarily choose the people with the most attractive portfolios, we rather tried to «compose» a student body, to create a mix of people with an interesting «chemistry» between them. More a blending of personalities than a pool of talent: someone young and naive, someone experienced, the conservative and the anarchist, the professional and the amateur, the engineer and the freak. It works beautifully.

38. The «chemistry» among tutors is as important. Most colleges in Germany operate with full-time tutors (on tenure!), and very few part-timers. On the other hand, there are design courses in Britain with only one full-time tutor and a host of part-timers. Whilst full-time staff provide the continuity on a course, part-timers create the necessary variety. Again, a good balance is essential. Too much of either at the expense of the other would be counter-productive.

39. Since 1988, design schools in Britain cannot rely on public funding anymore; they have to create their own revenue through commissions from industry or sponsorship. This new situation will dramatically reshape Design Education in Britain and elsewhere. One can expect half of all British design courses to fold within the next five years due to inflexibility or financial pressure.

Luckily, those schools which have always made it a point to stay in touch with industry and local governments, are well-prepared to survive. Over the past few years my friend Jamie Hobson at Humberside College (Hull, England) has successfully established contacts between the school, its graduates, design consultancies and industry, a network of mutual interests. Second and Third year course work consists to a large part of «live» projects with real budgets and actual deadlines. Students are introduced to «entrepreneurial thinking» which means creating marketable ideas and then getting these produced and distributed. The conditions for Design Education in Britain are tough, but they elicit creative responses from the pragmatists and the visionaries.

40. The end-product of a design curriculum is not so much a student portfolio or a checklist of marketable skills but a rounded, self-confident student personality.

(I thank Nicola Stockmann for her comments and suggestions.)