The University of Greenwich

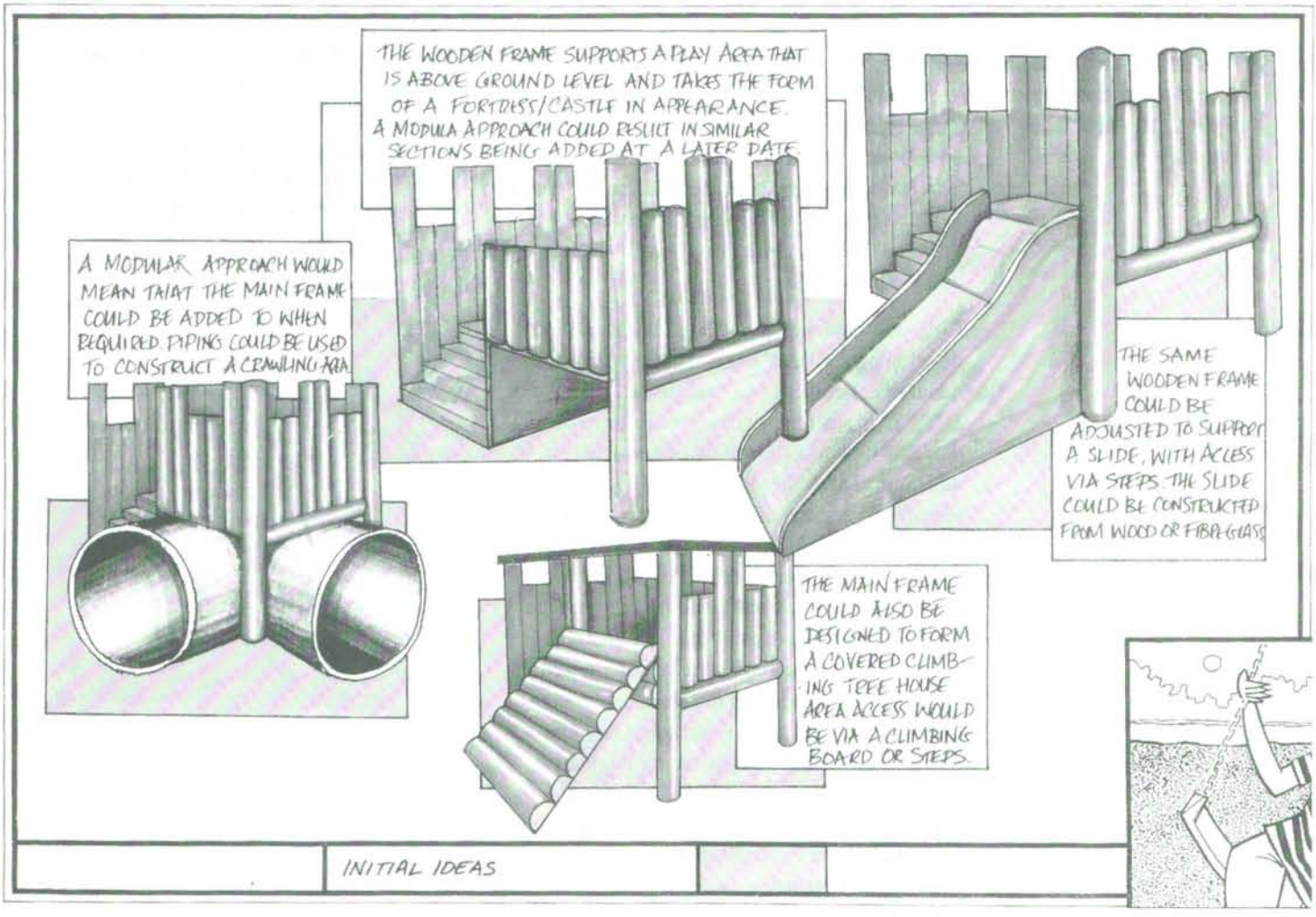
As with all training establishments, it is our intention to provide student teachers with the experience, expertise and opportunity to develop an innovative approach to the teaching of Design Technology through a series of developmental, subject-specific projects. One aspect of our philosophy encompasses a broad vision of design education where creative problem-solving tasks are, as far as possible, based in the real world and deal with recognisable situations which have the potential to be related to pupils in school.

All coursework is structured into a series of overlapping and inter-related activities centred upon our requirement that students engage in and respond to a wide range of tasks associated with product analysis, design and manufacture. We endeavour to create a supportive learning environment where individual students can gain in confidence, progress and improve the quality of their own design and technology.

All our undergraduates spend the first three weeks of the course undertaking a series of short teamwork projects. The introductory unit not only provides many students with a first taste of problem solving but also encourages peer group co-operation, the public sharing of ideas, and the ability of students to think on their feet. Importantly for all concerned, it also acts as an icebreaker, quickly establishing a positive, enjoyable working environment for designing and making which crosses course boundaries. Such group work offers scope for tackling many issues associated with both subject and professional development.

We feel strongly that our students should not only experience working closely with the community but should also see how such a focus could be applied to their own school practices. This enables them to interpret and deliver National Curriculum Technology through a range of viable and stimulating contexts.

The Social and Environmental project presents a situation where design teams liaise closely with a client who has identified a number of potentially solvable problems; these contexts are analysed to establish a viable project which can be fully realised to meet a specific need. Quite often this entails developing tight



Student's design for the play centre

Children playing in the new log cabin

The single-span bridge to enable pupils (including those in wheelchairs) to enjoy pond-dipping

organisational and management skills to enable students to work within and manage substantial project budgets which have been raised by clients through associated fund raising or sponsorship.

The 20 Social and Environmental projects during 1993-4 have included:

- A play centre project; this not only involved students in proposing and modelling design solutions to the community but also evolved into a co-ordinating and management role to optimise the involvement of a number of agencies, the local committee, the local authority, TEC and various companies to effect a radical redesign and refurbishment of the complete interior. This included relocating walls, fitting services, redecoration, double glazing, re-carpeting, and re-equipping the centre. The successful project prevented closure of an under-used facility by transforming it into a valuable community asset.
- A local primary school asked us to provide a team to design and make an outside play/learning area for their infant pupils. This needed to be an attractive and welcoming environment to pupils, provide shelter from the elements and simultaneously satisfy the needs for safety and supervision. Our design team presented a range of possible ideas and eventually designed and built a log cabin enclosure to meet all the specifications set by the client. The completed structure was finished to such a high standard that the LEA was prompted into sanctioning additional improvements to the existing, rather dilapidated school buildings.
- Another group of students worked closely with a local environmental centre, eventually accepting a brief to provide disabled access to a pond area. However, the pond had an existing plastic lining to prevent the use of any supporting pillars, which posed a number of design and construction problems which had to be overcome. The resulting nine-metre, single-span steel bridge was designed and built to enable pupils (particularly those confined to a wheelchair) easy and safe access for observation and pond-dipping purposes.

Not only do these projects require considerable imagination and ability on the part of the design team, they depend on combining shared goals with workable structures across design/production and academic constraints. Students draw heavily on prior experiences as well as personal and inter-personal skills in order to meet the obviously high expectations (including health and safety legislation) of all concerned. They can no longer rely solely on a prototype, a concept model or something that looks amazing on paper; the solution has to live up to real, operational criteria as well as satisfying the assessment requirements of the University.

It is encouraging to see our graduate and postgraduate teachers successfully managing group projects within both primary and secondary schools. We believe that this approach provides enhanced opportunities for our students to not only develop their competency as creative teachers of D&T but also be innovators capable of active involvement in the future evolution of the subject area.

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