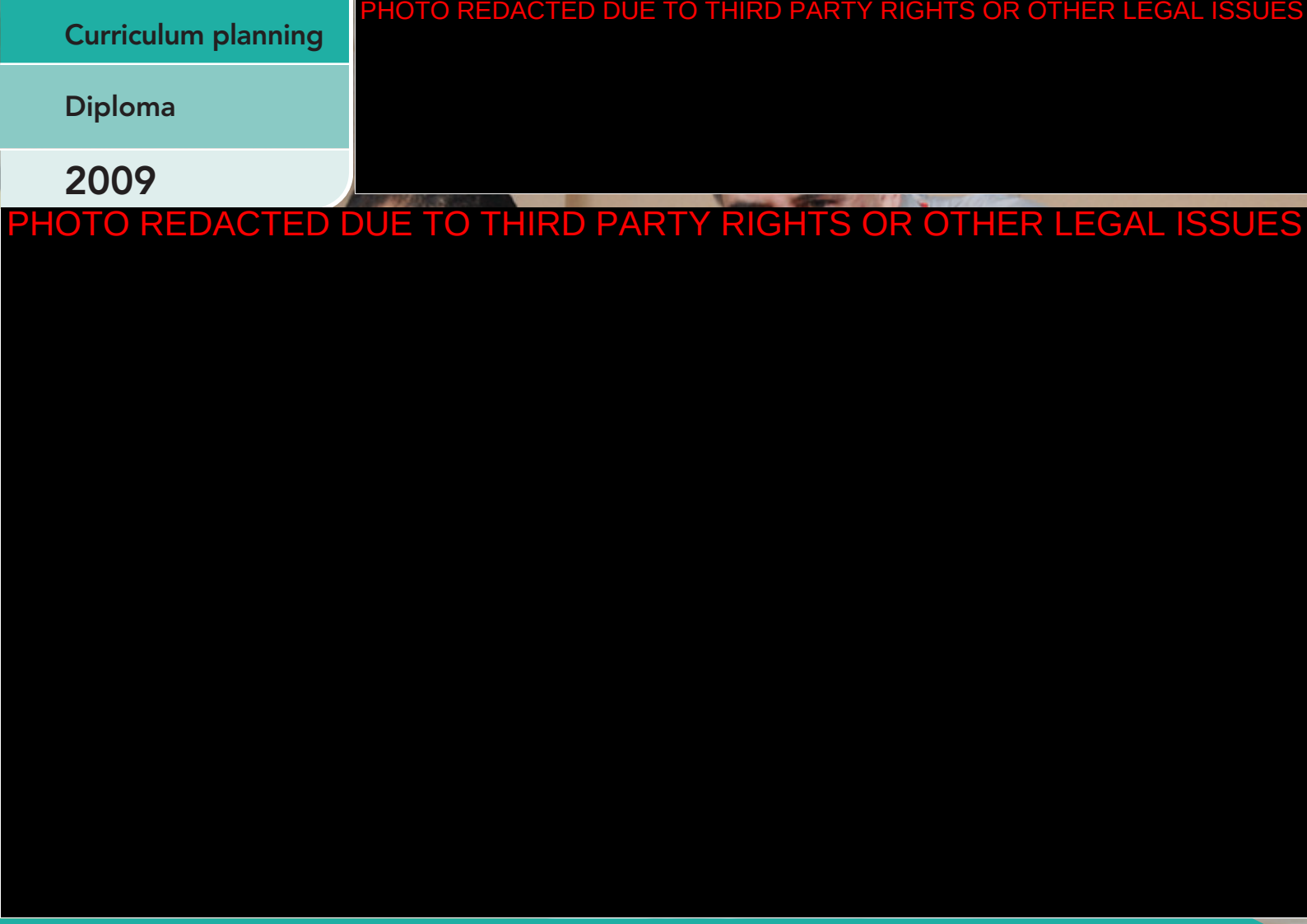
Curriculum planning

Diploma

2009



Applied learning case studies

QCA Qualifications and Curriculum Authority

Delivering the 14–19 education and skills programme

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First published in 2009

ISBN 978-1-84721-933-6

Printed in Great Britain

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Introduction

The Diploma offers a high-quality learning experience that brings learning to life in new and exciting ways. Applied learning sits at the heart of the Diploma and covers at least 50 per cent of the principal learning component.

This publication contains 15 case studies that illustrate applied learning in action and are designed to support practitioners and curriculum managers in their planning and delivery of the Diploma. There are three case studies, one for each level (Foundation, Higher and Advanced), for the following lines of learning:

- construction and the built environment
- creative and media
- engineering
- information technology
- society, health and development.

Applied learning within the Diploma

Applied learning is the development of knowledge, skills and understanding through settings or scenarios that relate to the sector. It enables learners to develop skills and understanding in a variety of contexts with teachers, other learners and individuals from outside the classroom.

High-quality applied learning is likely to include:

- interaction with professionals
- learning activities linked to professional job roles
- real investigation and active enquiry
- learning through doing
- interaction with other learners through group work
- learning in different contexts.

In order for applied learning to fulfil its potential, it also needs to be:

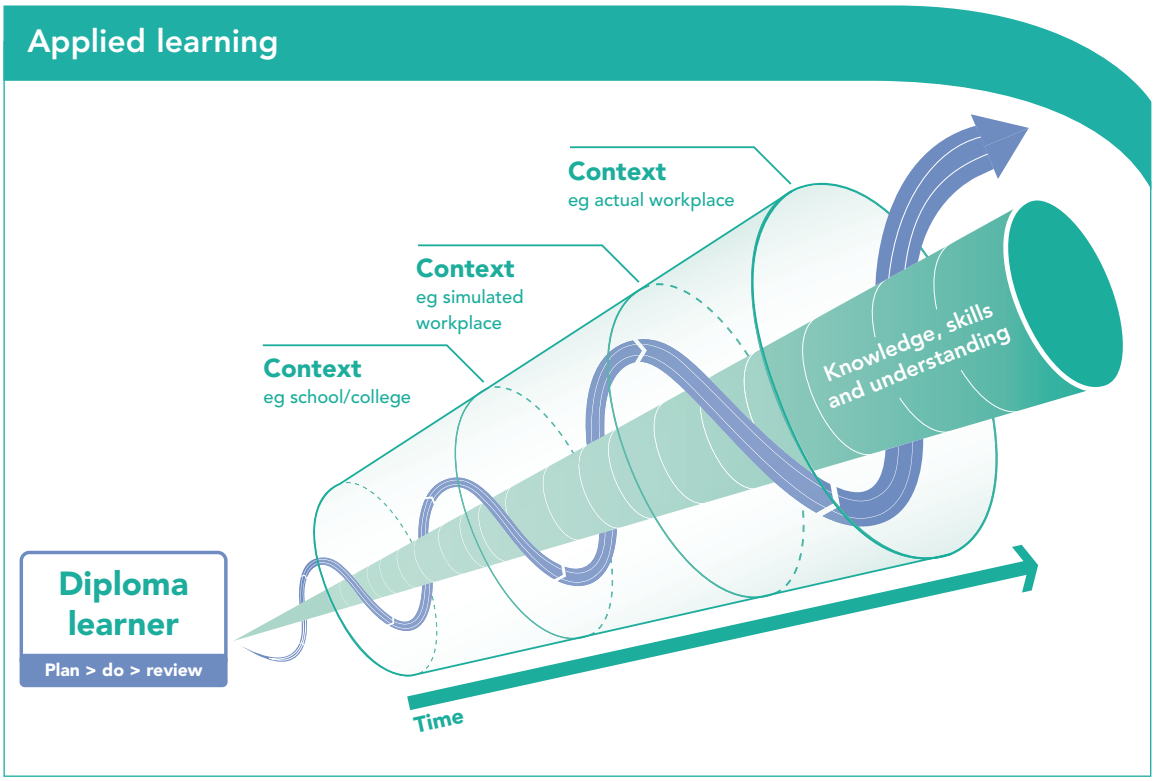
- experiential – learners are fully aware of the purpose of each activity, learn from the way they approach it and can apply that learning to other contexts
- contextualised – learners can see the relevance of their tasks and activities to the work of the sector
- personalised – all learners' needs and aspirations are met.

Benefits of applied learning within the Diploma

High-quality applied learning brings relevance and meaning to the Diploma programme, by providing opportunities for learners to engage in tasks that reflect the world of work. By placing learning in different contexts, learners are able to develop knowledge, skills and understanding and to transfer these to new tasks and situations. The plan-do-review cycle runs through each learning activity, enabling learners to move forward with a deeper understanding of what they have learnt and how they can apply it in the future.

Applied learning also has an important positive, motivational impact, as good applied learning is likely to take place in a variety of contexts and with various practitioners, including working alongside industry professionals.

The diagram below illustrates the development of knowledge, skills and understanding through applied learning in different contexts. Running through this is the plan-do-review cycle, which the learner applies throughout their Diploma.



The key theories of learning that underpin the Diploma suggest that learners benefit from a range of different, but connected, contexts. The publication *The Diploma and its pedagogy* can be found on the QCA Diploma website at www.qca.org.uk/qca_19707.aspx.

Planning applied learning

There are a number of factors that need to be taken into account when designing and planning applied learning within Diploma programmes. These include:

- blending and sequencing applied and non-applied learning to develop coherent programmes of study
- obtaining the support of sector-relevant employers
- ensuring the approach to applied learning is based on professional processes and practices
- planning for the development of personal, learning and thinking skills (PLTS) and functional skills through both applied and non-applied learning.

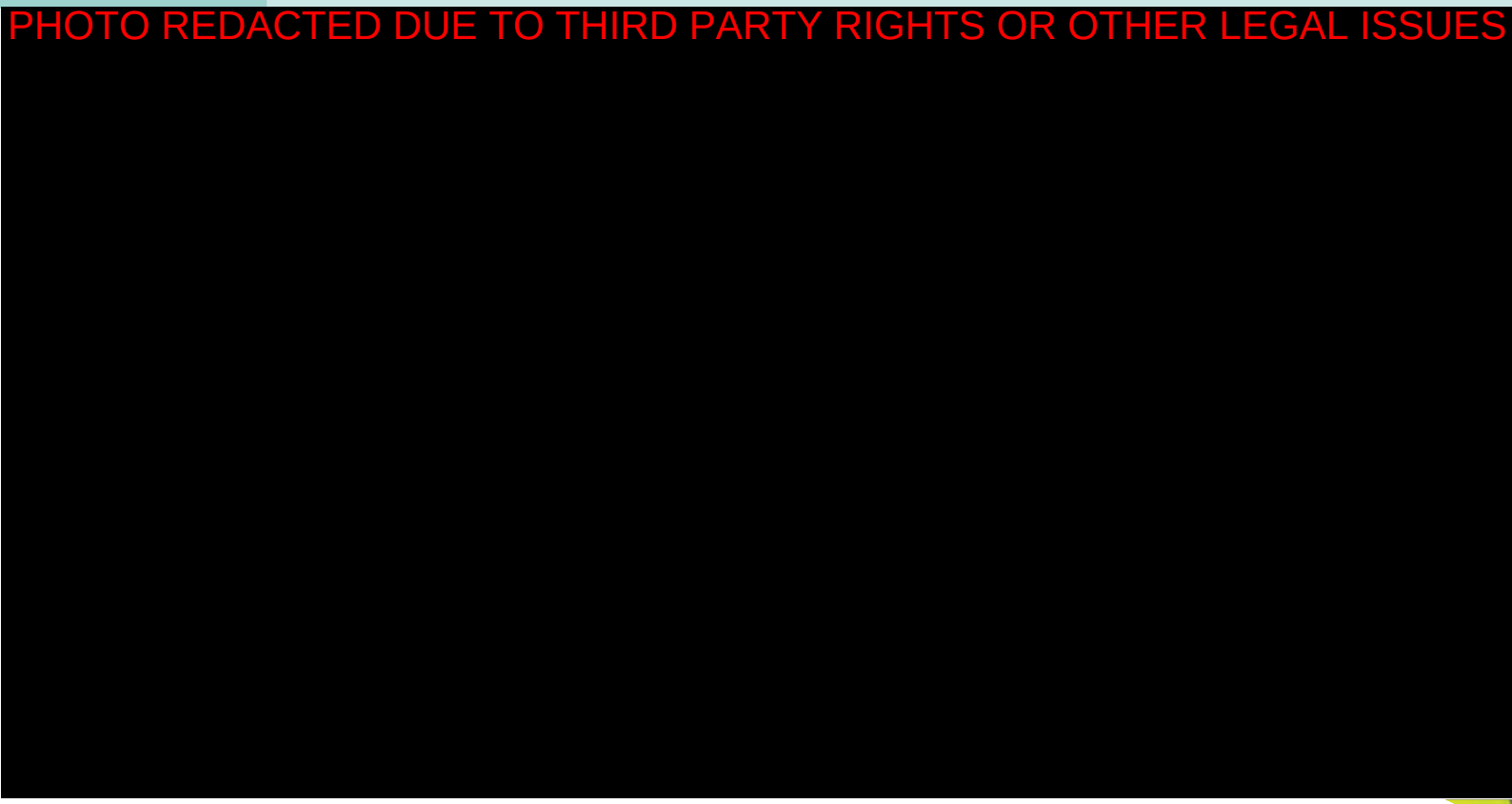
Delivering applied learning

Wherever possible, learners should be given purposeful tasks and assignments set within the context of the industry sector represented by the Diploma line of learning. The context for all applied tasks should include as many characteristics of a real workplace as possible. For example, practitioners could introduce health and safety laws or codes of conduct, teamworking could reflect team structure in the workplace, and the tools or technology used should be appropriate and up to date.

Video clips showing applied learning in action can be watched on the QCA website at www.qca.org.uk/diploma.

CASE STUDY

1 Foundation Diploma in construction and the built environment – Swindon consortium



Summary

Learners were introduced to the safe working practices in this sector. Working with industry mentors, they were involved in reconstructing and simulating local authority planning and employer consultation meetings.

The applied learning activity

Swindon consortium devised Foundation level assignments that allowed learners to develop a broad awareness of the common processes and principles that govern the industry. Health and safety, an important focus of the industry, was a significant element of the learners' first assignments. Learners developed a basic awareness of the processes and practices governing health and safety in the workplace through a series of interactive e-learning activities. They were placed in simulated work environments, from an office to a small construction site, and asked to identify hazards and make recommendations for safe working.

Having been introduced to basic health and safety rules, learners considered the health and safety practices of two construction companies onsite. One of their first tasks while onsite was to spot any potential hazards and risks faced by the workers on the site. They compiled a safety inspection visit report using the company's internal

documentation procedures and fed back at the site safety audit meeting on the potential risks they had observed.

Learners were asked to make recommendations on how to address any shortfalls in the safe working practices onsite. They reflected on these issues back in the classroom.

A further site visit, to an established manufacturing organisation, consolidated the learning that had taken place. Learners were given a guided tour by the site operations manager, who introduced them to the company's zero tolerance approach towards unsafe practices. Following this visit learners prepared a presentation based on the working knowledge they had collected so far.

The next activity developed learners' understanding of the local authority planning process. Working with planning professionals from the local authority, students worked in small groups to consider the full planning process. The activity was based on the completion of a planning application for a small construction. One group of learners submitted the application. A different group assessed the application and made a final decision on the request for building permission.

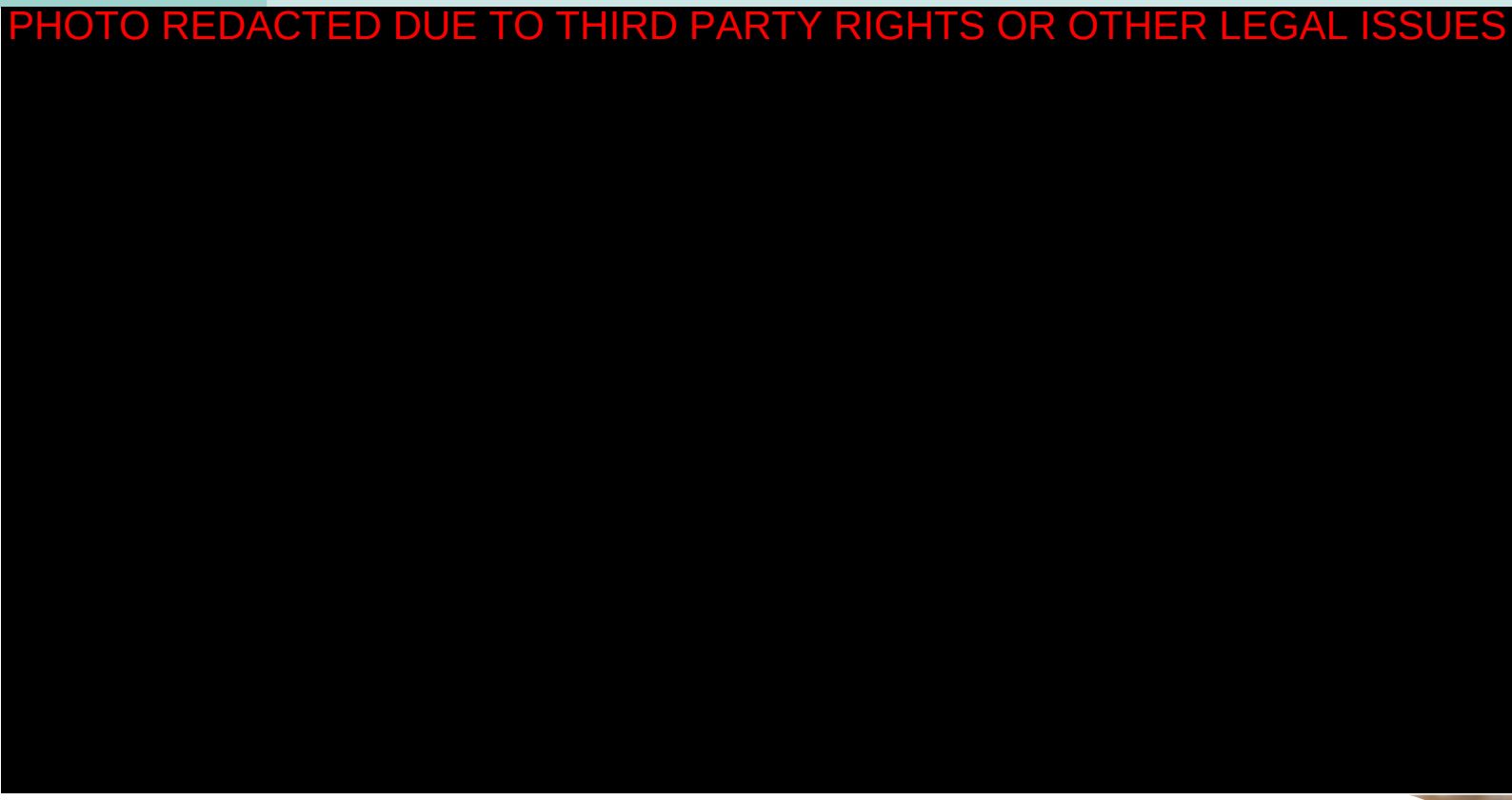
Building on the knowledge and skills they had gained from the previous activity, learners visited the National Self Build and Renovation Centre in Swindon. Here they studied exhibits that explained the importance of the choice of materials, building methods and how to understand complex planning regulations. In the renovation exhibition learners saw for themselves the 'before' and 'after' stages of a renovation project. They walked through a derelict house with leaky guttering, half a roof, rotten timbers and damaged brickwork. In a 30-minute audio tour they were guided through the full renovation process and the trials and tribulations encountered along the way. At the end of this journey learners could see the final result – a modern spacious home.

The learner outcome

Exposure to current practice involved learners in making positive contributions to the tasks set for them. Through staged, well-planned activities, which were supported by employers, learners could identify best practice and share this with representatives from the industry.

CASE STUDY

2 Higher Diploma in construction and the built environment – Barnsley consortium



Summary

Kirk Balk School used its new school building project as the core resource for the focus and delivery of the principal learning units.

The applied learning activity

As well as securing the commission to build the new advanced learning centre at Kirk Balk School, building contractor Liang O'Rourke also supported the school's preparation for Diploma delivery. Having a contractor on site gave practitioners the opportunity to secure a relationship that would benefit learners. As part of the tender process for the new school build, the school secured a working relationship in which the selected company committed to provide work placements, master classes and professional expertise.

The new-build project involved learners right from the start. Working alongside the architects, learners were involved in the early designs of the advanced learning centre and the learning zone, a 60 m^2 classroom with full information and communication technology (ICT) facilities. After initial research with their teachers and peers, learners joined a series of design and planning sessions with professionals from the construction company. From the results of the research, learners compiled a presentation identifying the important design needs for the learning zone classroom. From this point on, they

were given a series of assignments to identify the types of materials suitable for their proposed designs and to organise focus groups to enable the company to test ideas and gain feedback from the school community.

The relationship with the contractor involved work in which learners were able to gather knowledge and skills for two of the key themes of the Diploma: design the built environment and create the built environment. Ground investigation contractors shared reports for the new site and learners were involved in identifying the potential risks and issues for the new build.

The head of the Barnsley Building Schools for the Future programme held regular meetings at the school with learners to discuss planning procedures and share the relevant documentation on the site. Learners were asked to look in detail at the documentation and highlight any issues they thought might have been overlooked. Learners recorded their comments and discussion points as minutes of meetings, and these were placed on the agenda at the planning and construction meetings with professional project managers from the building company.

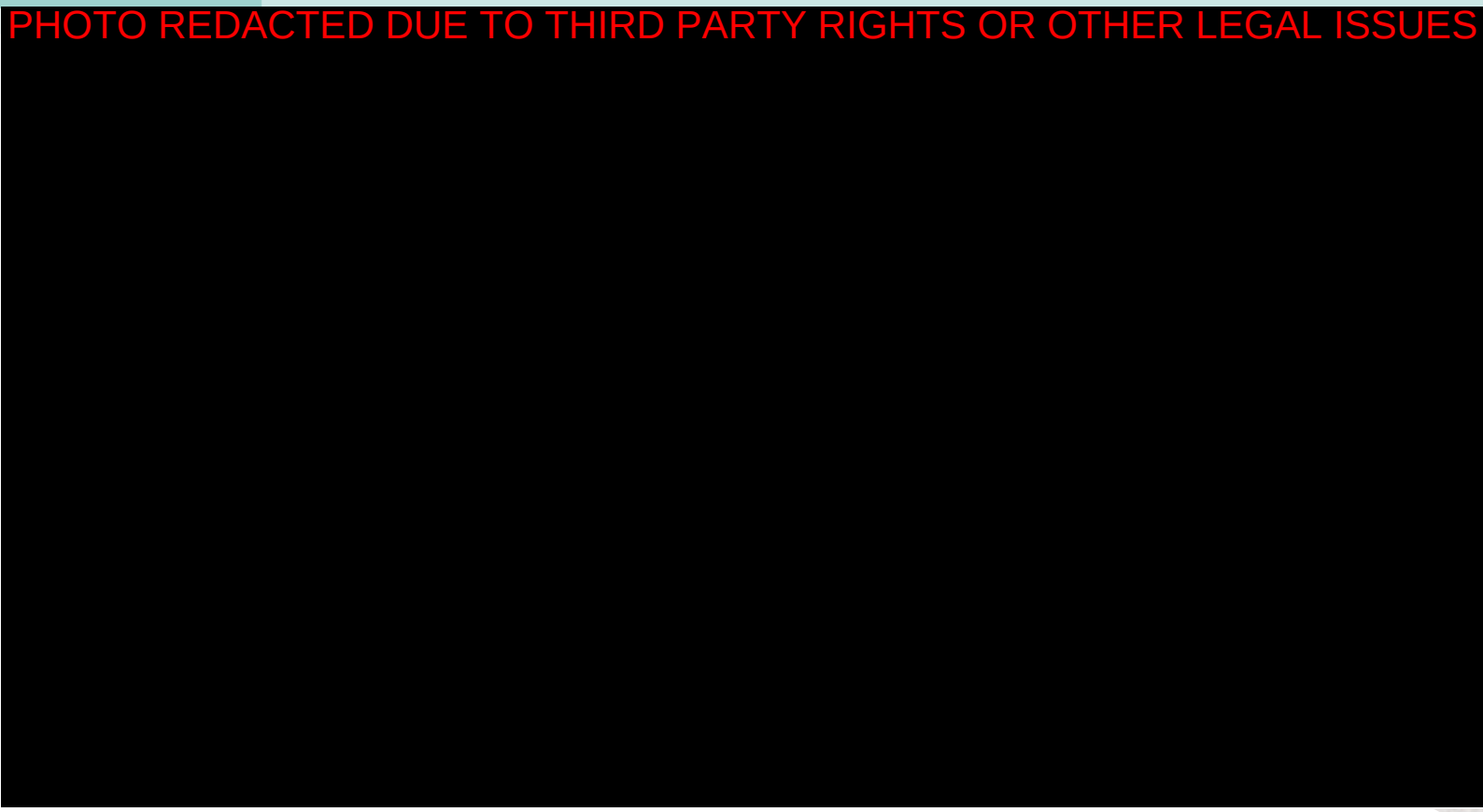
A series of progress assignments was created to engage learners in the project's progression. Learners were involved in the progress reports and in meetings, where they tabled items for the agenda. They were asked to make contributions to the environmental and sustainability remit and recommend materials for the interior. Learners were also given the opportunity to understand the work schedule, produce health and safety reports for the onsite team and review building specifications.

The learner outcome

The full involvement of learners in the building project not only created a sense of ownership but also provided the construction company with valuable information on the uses and requirements of the new build. Learners used a wide range of skills through liaising with professionals in meetings and discussions while on site visits, and exploring the project's day-to-day operational needs.

CASE STUDY

3 Advanced Diploma in construction and the built environment – Barnsley consortium



Summary

Learners explored the principles and methods involved in urban design. They researched the impact of a construction development on the local community.

The applied learning activity

Advanced level learners at Barnsley College met on a regular basis with representatives from Browns Construction Group Ltd, a large local construction company working on a plaza development that included high-rise residential, parking, retail, hotel and commercial buildings. Learners used this construction project to explore principles and methods in urban design and their influences on the built environment, and to focus on the design elements. Through this they explored the three key themes at the core of the construction and the built environment Diploma: design, create and value the built environment.

At a meeting with the architect, learners gained insight into the vision for the construction development and its place in the local setting. With this broad understanding, they were set the project task of creating a set of promotional materials to inform the local community.

Working in small teams, the learners liaised with local community and environmental groups to understand their views and concerns about the development. Initial research

identified a number of issues from the local community about the development. A series of Q&A sessions allowed the learners to discuss and explore these issues. Reporting back to the company, learners shared their findings and made recommendations.

The learners organised activities based on their recommendations, including taking representatives of environmental and community groups on a tour of the viewing galleries and platforms above the site. Accompanied by the site managers, learners explained the planned use of the development, the choice of building materials, the impact it would have on the aesthetics of the town and the economic implications.

Another activity saw the learners setting up several exhibition boards in local libraries and shopping galleries to inform local people of the potential for positive change. These included drawings and plans developed by the learners to give the public a good idea of the look and feel of the building.

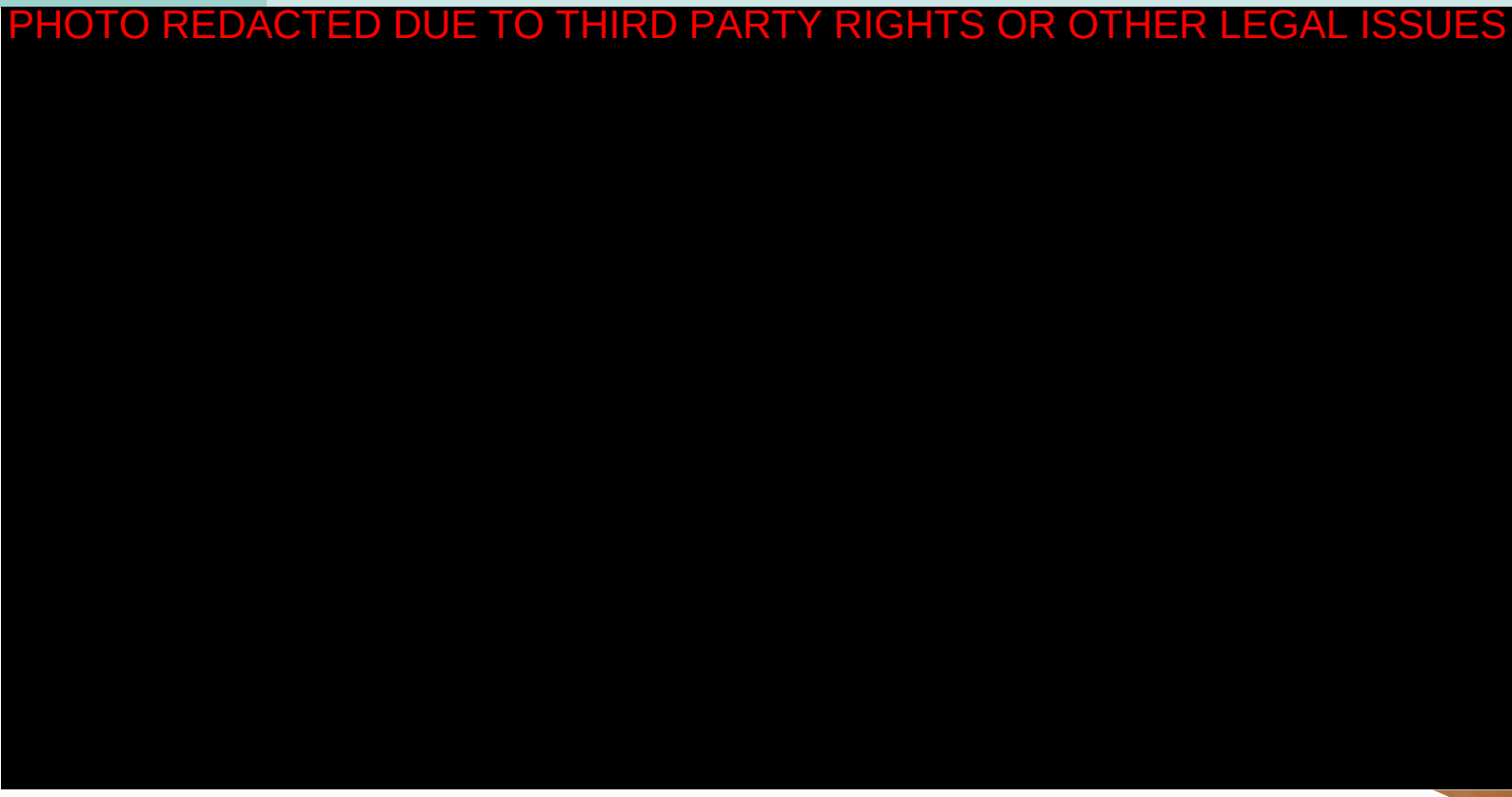
This activity also gave learners the opportunity to contact the local press and gain editorial space in the community news sections to present views both for and against the development and its possible impact on the local community.

The learner outcome

Learners were given the opportunity to see the construction industry from different viewpoints and to develop an understanding of local concerns. They took the opportunity to direct and influence, using a variety of communication strategies to reach the communities directly affected by the development.

CASE STUDY

4 Foundation Diploma in creative and media – Dewsbury consortium



Summary

Learners explored typographical design and applied this through the creation of a poster campaign.

The applied learning activity

Foundation level Diploma activity was devised to give learners the chance to experiment with ideas in different media using various materials, culminating in learners working directly with employers on a real working brief. In the early stages the activities were carefully and realistically simulated. Teachers took on the role of employers through the various stages of the project and critically appraised the learners' progress.

In the unit 'Introduction to creative and media skills', learners explored skills from each of the three main areas: visual arts, performing arts and media. The outcomes identified by Kirkless College for the project broadly related to art and design but could easily be extended into both the media and performing arts based outcomes. For example, learners could explore and produce their responses as audio, musical or performance pieces.

Learners developed their skills though the creation of their own imaginative, experimental typeface. In the introduction, the teacher encouraged learners to experiment with a range of very different materials to represent the meaning of words, for example burning and tearing paper into shapes to spell out the word 'smoky'. The aim of the project was to extend learners' understanding of typographical design. The teacher introduced new skills and techniques for the learners to use, such as creating texture with paint, collage and wax.

The teacher then provided a selection of 14 stimulating words with a strong sense of image and where the sound echoed the meaning, for example 'spongy', 'spiky' and 'slimy'. Learners selected two words to explore and develop. The purpose of the project was to devise a creative and experimental way to represent the meaning of the words. The teacher set specific tasks that learners had to carry out to support their activities. These included research into the history of the word, choosing typefaces and fonts, developing ideas around the words and thinking about what the words represented. At the end of the project learners mounted their finished ideas onto A3 card for presentation and evaluated each other's work.

In the second project, learners were asked to research a campaign sponsor by identifying a number of organisations that promoted animal welfare and then select one as a client for which they would prepare a poster campaign. Working alongside a local employer, the teacher planned a working brief that was presented to learners. Learners were shown how to carry out research and gather a range of secondary source materials, such as logos, leaflets, photographs and simple text on animal welfare organisations. Once the information had been secured, learners selected their sponsor, refined their collection of materials and used them to generate original ideas.

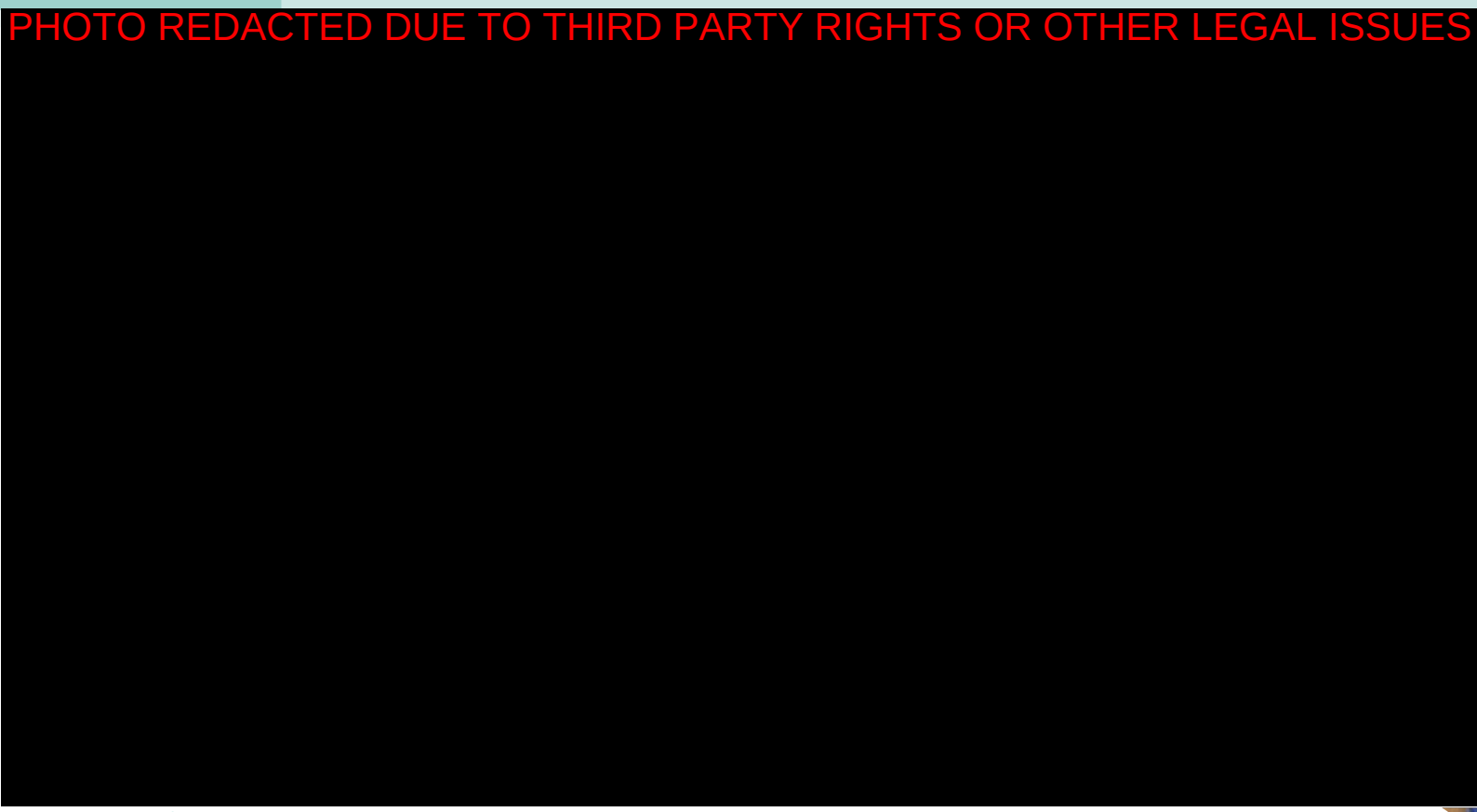
Learners explored a range of images for the poster, which they developed through drawing, painting and collage. They developed alternative slogans in a variety of fonts, experimenting, as before, with shapes, scales and textures to create an impact with the words. From the preparatory work learners selected a final design and worked it up as a finished A2 poster that included an accurate portrayal of the sponsor's logo.

The learner outcome

Learners extended their creative skills using paint, collage and wax. They developed research techniques through information gathering, learning how to appraise their work critically and determining how best to progress. They worked to a set brief with a client and explored and presented a controversial topic.

CASE STUDY

5 Higher Diploma in creative and media – Knowsley 14–19 Collegiate consortium



Summary

Learners took part in a product design and marketing project to develop fair-trade sweets. They also designed an educational tool for visitors to a gallery.

The applied learning activity

To prepare for teaching on the creative and media Diploma programme, the consortium ran three test modelling projects with Fuse Theatre and Toxteth TV. These test projects were used as tasters for learners who were considering taking the Diploma the following September. The projects also gave teachers the opportunity to gain experience in working with external partners.

Based on unit 3 'Artefact' from the principal learning specification, learners took part in workshops for creative briefs covering design theory, research and planning, use of materials, marketing and branding, and creating a mock-up pitch for a client. The initial working brief was a product design and marketing project provided by a creative design company to develop fair-trade sweets as a mainstream product. The teacher introduced the project to learners with the company's support and guidance and the learners set about exploring the mainstream market for sweets. They collected evidence from the high street, identified the key players in the market and took note of

the style, shape, message and environment in which sweets were sold. After market research involving the public, learners were ready to make a proposal to the client.

The purpose of this project was not only to explore creative skills but also to show that creativity does not happen in isolation; it may have a commercial focus. These messages were significantly reinforced by the client when learners were questioned and challenged over their research and proposals.

Having practised the skills and investigations needed for the delivery of a real pitch, learners were given a commission by the Bluecoat art gallery to create an activity that could be used as an educational tool for visitors.

Learners were given an overview of the creative industries including the range of educational products already in use at the gallery. Innovative products were already being used used by the gallery to increase visitors' enjoyment and understanding of the life and work of the gallery. Learners were given an overview of approaches to the creative process that included the use of sketchbooks, diaries, photographic documentation and art portfolios.

Having been introduced to a range of creative practices, learners then had the opportunity to test out a software package called Explore. They analysed the effectiveness of a series of activities that were part of this software package. Working in small groups, learners developed their own activities. This involved generating ideas on the educational content, three-dimensional modelling, packaging and presentation, the user instructions, costing and prototype manufacturing. By the end of the session learners had developed two new activities with Explore:

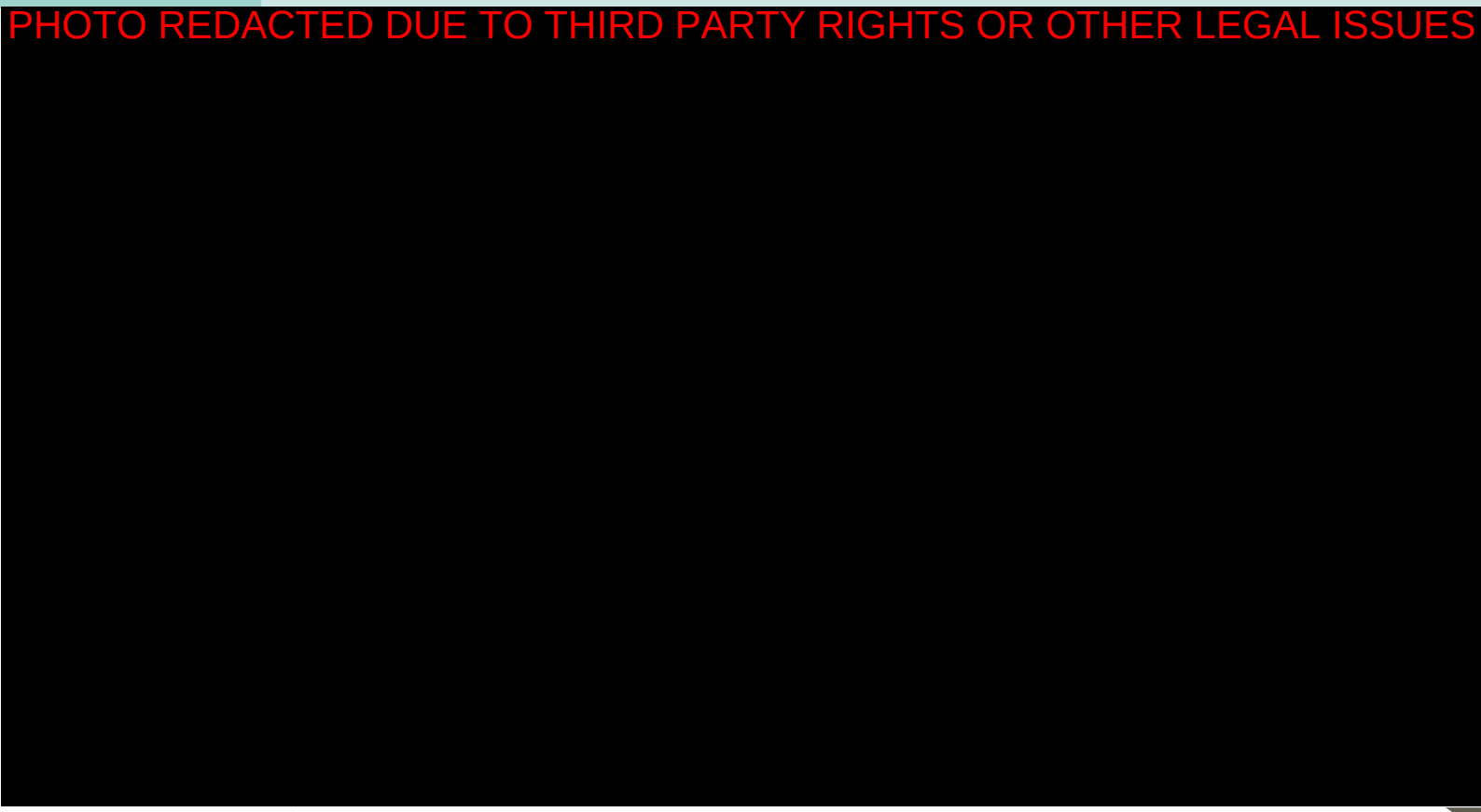
- The first, called *The Institution*, was an interactive story that developed as visitors moved around the building. By using a swipe card system, visitors could enter different parts of the building and access areas of interest and information, making their journey around the building a more personal experience.
- The second, called *Fascinate*, developed a picture card quiz activity. Here visitors chose a picture card with clues relating to different spaces linked to the heritage of the building. The clues guided visitors around the building on a learning journey.

The learner outcome

The Bluecoat gallery project encouraged learners to develop ideas that could become part of a successful software product that was already used by the gallery. By understanding the approaches, style, content and objectives of Explore, learners began to recognise the essential ingredients that made up this successful product and then used those ingredients to shape new ideas.

CASE STUDY

6 Advanced Diploma in creative and media – Liverpool consortium



Summary

Learners took on the roles of actors, musicians, technicians, costume designers, front-of-house and backstage support staff in a 10-week performance project.

The applied learning activity

This project was developed to give learners a complete experience of the theatre as a commercial business. Embedding enterprise within the Diploma was one of the key objectives for the Diploma team at Liverpool College. Initially learners were set a series of challenges to find out about the Liverpool Empire, an established and respected theatre in the heart of the city. Learners worked in the nearby city archive library sourcing old theatre photographs and researching newspaper articles to find out about the range of performances at the theatre over the decades. Before visiting the theatre, learners used this information to create a collage of the theatre's history. By the time learners set foot in the theatre, they had already developed respect for and understanding of for the environment in which they were about to work.

Based on unit 2 'Performance', learners were given a brief to create a performance that would at least break even. They planned a musical performance, in which they

undertook various job roles and functions, leading to a finished performance. To assist them in this brief, learners were able to observe actors and backstage staff, who were preparing for a live show, *Footloose, the musical*. They quickly experienced the pressure of a live show and gained a full appreciation of the role of teamwork in achieving a successful first night. Some learners worked front-of-house, welcoming and hosting local VIPs, some worked in the support functions in food and beverages during the breaks in performances, and others worked backstage, gaining an understanding of the work of technical professionals involved in the performance.

Learners were organised into groups and each group was allocated a specific set of tasks to help create the performance. For example, one group modelled an audience profile, examined databases, analysed marketing literature, made decisions on a target audience and considered seat prices, working within a specified budget.

A different group of learners gathered data and information on the costs of producing a musical performance – the hire of the orchestra, the on-stage requirements, costumes and materials. In order to remain within budget, learners took full responsibility for developing the stage and costumes and used musicians from the other elements of the creative and media Diploma.

Working with theatre professionals, learners developed the technical skills of designing the show, the storyline, the choreography, the music, the costumes and the set. Working on the stage, learners developed a full appreciation of the space, acoustics and projection of such a show. While initially many learners saw the actual performance as the priority, the importance of the other technical functions became evident in the decisions they made as they fine-tuned their work on stage.

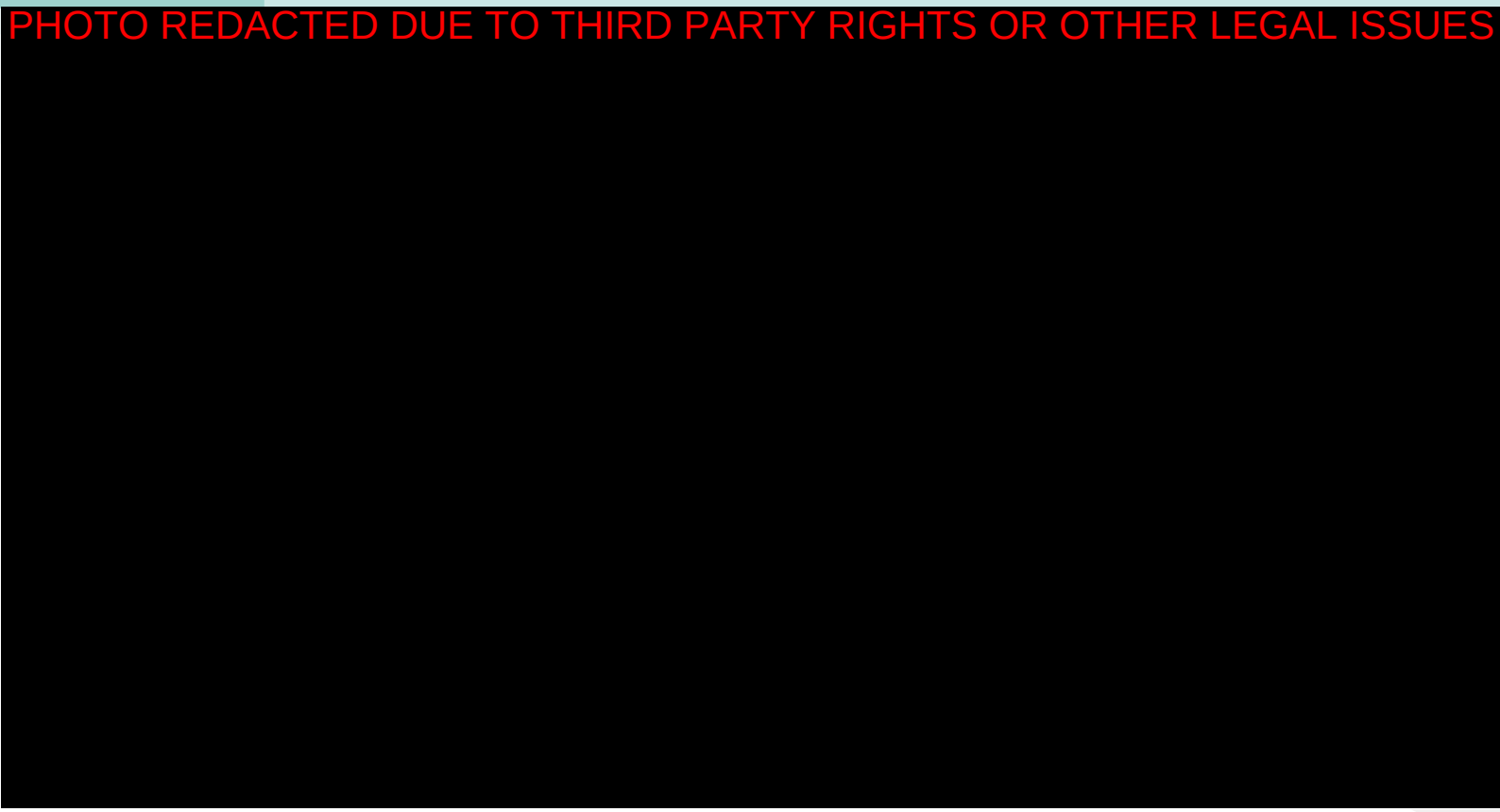
Learners presented the design of the final performance plan to the theatre board. This laid out in detail the financial considerations, a marketing and communications strategy, ticket sales, an audience profile and target numbers. A separate presentation was given for the performance. Here learners were observed by their mentors, resident theatre actors and performance directors, who reviewed and evaluated the musical and dance performance. Learners were encouraged to incorporate changes and worked with mentors to improve the final piece. The learner group working on the costumes for the performance evaluated the choice of materials, costs and impact of the costumes and their effect on the overall performance.

The learner outcome

Setting a challenging yet open brief gave learners the opportunity to shape the processes and approaches in the context of performance. Their contact with theatre professionals and support staff gave them a true understanding of the roles and commercial priorities of a real performance. Often creative considerations are felt to be the critical ingredient, but through this project learners recognised the interdependency and interaction of all the other functions in the theatre to deliver a successful and viable performance.

CASE STUDY

7 Foundation Diploma in engineering – North-west Leicestershire consortium



Summary

Learners were involved in raising awareness of sustainability and its implications in the engineering sector.

The applied learning activity

In the north-west Leicestershire consortium, learners were given the opportunity to make connections between the engineering world, engineering technologies, processes and engineering for the future. Learners on the Foundation Diploma unit 1 'Exploring the engineering world' attended a conference on sustainability organised by Loughborough University. The topic 'sustainability' was chosen as it is applicable across the disciplines of engineering. At this event learners attended a series of workshops and met with several employers representing a range of industries and services. In preparation for the conference learners were involved in a series of research tasks that raised their own awareness of sustainability practices.

After listening to employers presenting strategies for sustainability at the conference, the learners took part in three workshops, where they explored employers' responsibilities and commitment to sustainability. The first workshop, hosted by an

employer representative, asked learners about their expectations of what local councils and national government could do to increase the awareness of sustainability across all sectors in the local area. Learners worked in groups to explore these questions and concepts before presenting their ideas to the other workshop members.

Having been introduced to the idea of the breadth of sustainability, learners investigated the different types of sustainable energy sources at the Centre for Renewable Energy Systems Technology (CREST). They were given the task of developing energy strategies for particular regions of the world using the most economical mix of solar, wind and hydropower. Each group reflected on the available power in the locations they had been given, the current culture of sustainable power in the region and the possible alternatives that should be considered.

Learners were then ready to put together strategies that could have an impact on the future of the sector. They worked on a proposal for the energy requirements for a new school building. They explored options based on cost analysis, meeting energy objectives set by local councils and developing a realistic strategy for local stakeholders, who were primarily households adjacent to the proposed school site. Learners set up a focus group to hear the views of the local community on the proposed new build. They listened to their concerns and suggested possible solutions.

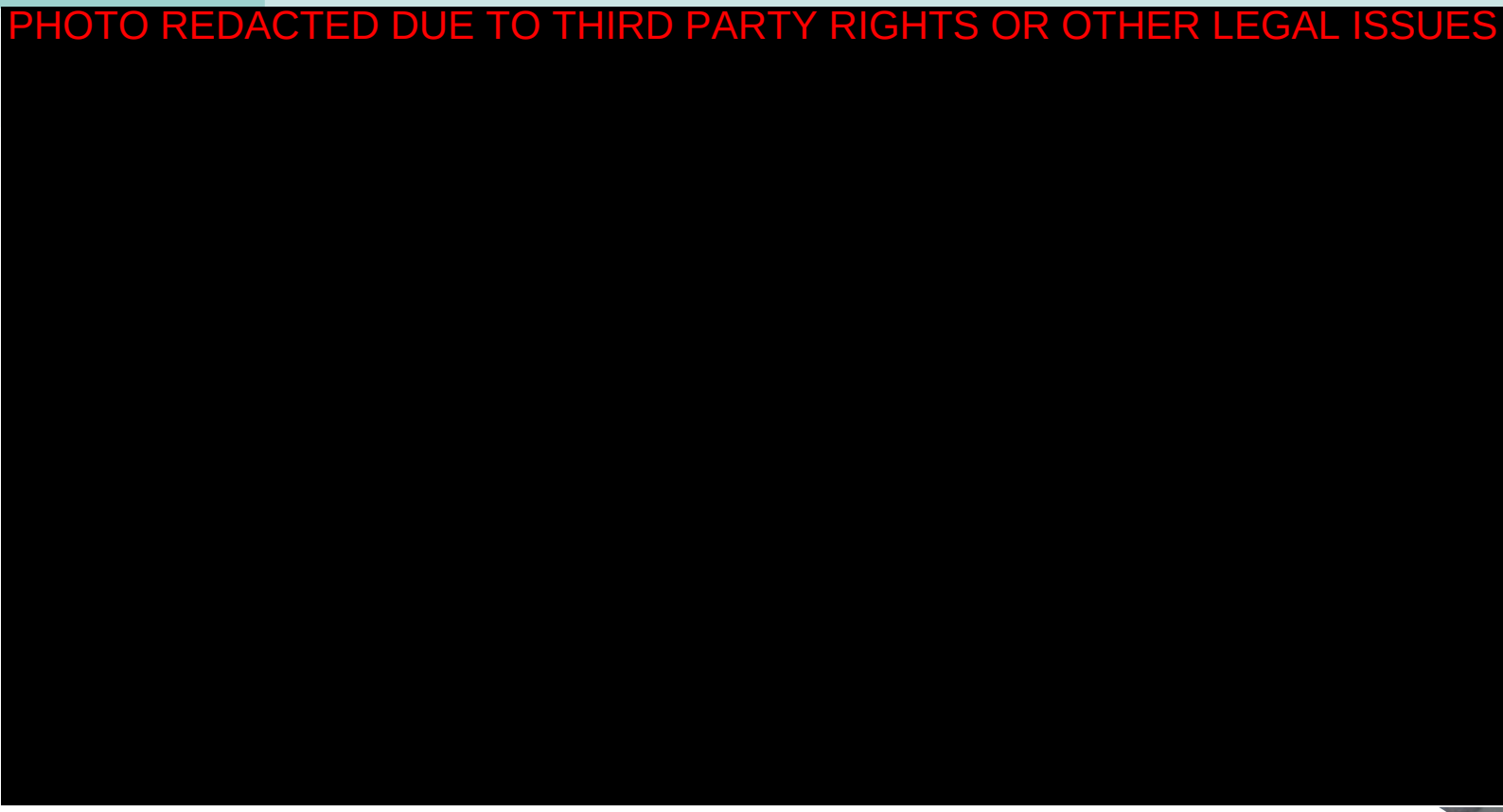
Following the success of the conference, teachers reinforced the learning with visits to a traditional power station and a wind farm. Using their experiences at the conference, learners discussed, questioned and challenged staff at these locations on their approaches to sustainable power.

The learner outcome

Learners gained a real sense of purpose very early on in their programme of study. Attending the conference at the university campus raised learner aspirations and enabled them to recognise the broad range of career options available to them in this sector. Their exposure to the debate on sustainable power influenced their understanding of the ethical dimension of engineering projects.

CASE STUDY

8 Higher Diploma in engineering – Grantham consortium



Summary

Learners designed and developed a new plant system for a milling operation.

The applied learning activity

In planning the learning activity, teachers wanted to reflect the needs of local, small and established family-owned businesses They worked with BGB Engineering, which specialises in bespoke engineering activity and manufactures electrical switchgear for wind turbine manufacturers across the globe. The activity was a problem-solving one, based on a brief from the company. Learners were to meet an identified need by developing a clamp system for a milling operation within a workshop environment. At the start of the project they were all introduced to the safe use of engineering machinery, including turning, milling, drilling, tapping and grinding.

An important aspect of the activity was to complete an engineering project cycle through the stages of brief, design, manufacture and evaluation. In groups, the learners discussed the requirements and usage of the clamp system. Each group produced a design for a prototype using computer-aided design. Initial designs were subject to a Q&A session from the employer. Learners had to justify their choice of materials, the initial costs and the working plans for the manufacture of the prototype.

Employees from the company design office were on hand during the process to offer advice and support for any improvements that could be made to the design. The employer emphasised the importance of accuracy during manufacturing, reduction of wastage at every stage and safe working, leading to a cost-effective final product.

While manufacturing their prototype, learners kept a work log where they recorded their approaches, successes, difficulties and reflections on the process. They were also observed by members of the technical support team from the company. Assessments of skills were made at key stages, such as safe working, correct use of machinery and techniques, accuracy and handling of materials. Learners received individual feedback on these skills when the prototype was ready.

The completed prototypes were given to technical operators in the workshop to test and trial, and the learners again received feedback from the team. Learners wrote a final pre-manufacturing report, taking into account the findings of the testing process.

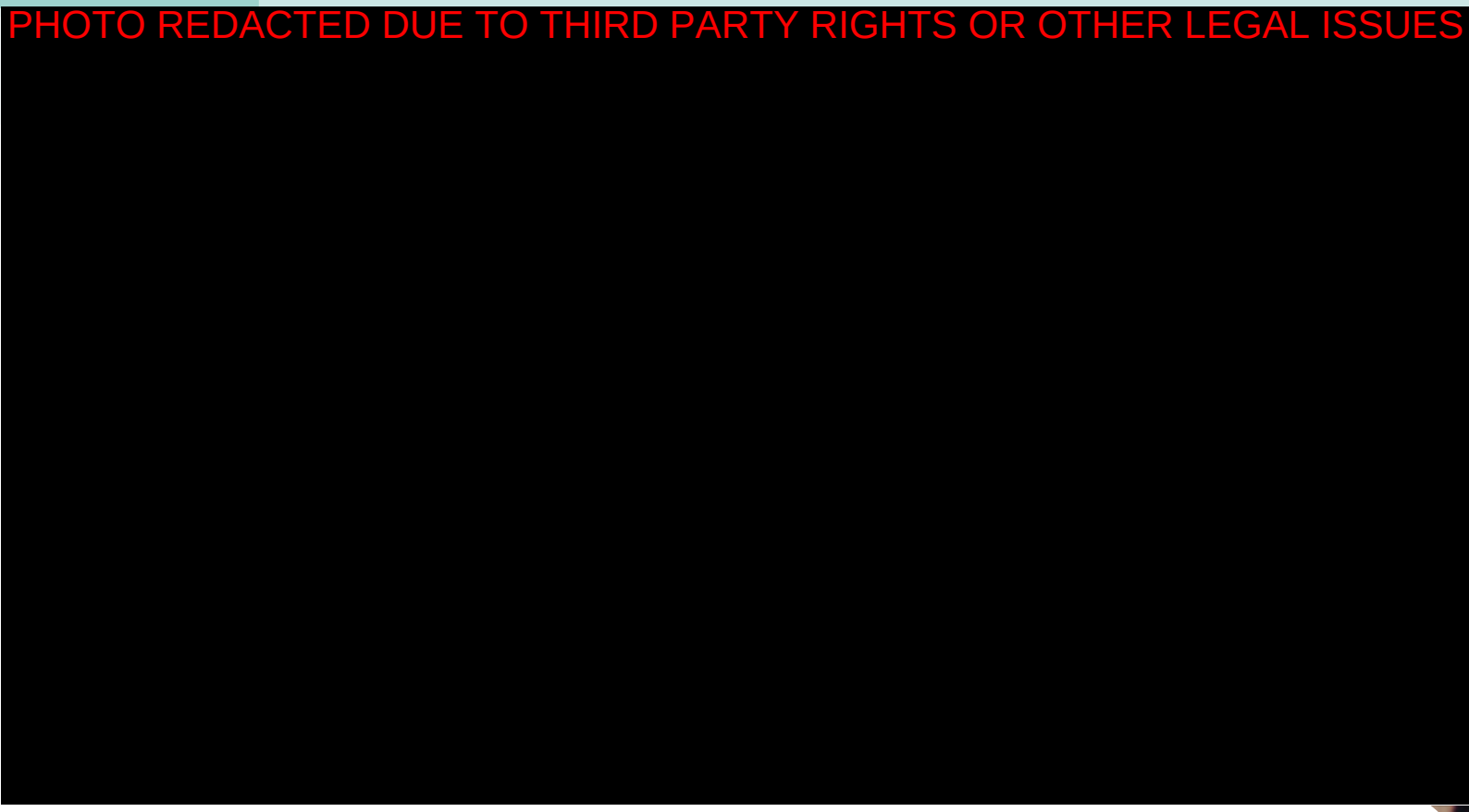
The final stage of the project involved a presentation to the managing director of the company, who tested out the prototype clamps in the workshop. Learners shared their experiences of the project and discussed possible alternative courses of action. The managing director stressed the importance of the learners' understanding of the processes and practices they had undertaken and questioned them about any problems along the way and how they had overcome them.

The learner outcome

Direct involvement in the cycle of development for an engineering prototype gave learners ownership of the decisions and choices they made along the way. Targeted feedback by technical experts from the company gave each learner the opportunity to identify areas for further development and act on them in subsequent projects, as well as enabling them to reflect on the skills and knowledge they had developed in the course of the project.

CASE STUDY

9 Advanced Diploma in engineering – York consortium



Learners worked with a local manufacturing company on an alternative engineering design for its production line.

The applied learning activity

York consortium worked with Nestlé Foods, a company that manufactures a wide range of confectionery. Product movement through the factory is a critical component in determining the efficiency of the plant. Once the product – in this case KitKat – is manufactured and wrapped in the consumer packaging, it needs to be packed into large boxes that are shipped for distribution to stores. These boxes are transferred from the end of the production line to the palletising area on driven conveyors. The volume of boxes transferring along these conveyors is high and the plant can become very congested at times.

The project required learners to evaluate the efficiency of the production line. They were asked to propose alternative designs to eliminate the congestion. Learners were expected to complete a study of the current arrangement, gather appropriate data and provide an alternative design to alleviate the problem.

Nestlé gave learners an introduction to its manufacturing processes and site operations, including a health and safety induction. Learners also liaised with members of the site's engineering team, who provided design information.

Learners were asked to undertake a study of the existing equipment and production process. This included identifying:

- the capacity of the line – how many cases per minute could it handle?
- the load on the line – how many cases entered the line?
- the variation of the load – did the load change over time?
- the drivers of the load – how did the activity of the drivers affect the speed of the load?

In the early stage of the project, learners spent time observing practice on the production line. Having gathered data on the line, the learners gave a short presentation of their findings to the company operations team, in which they explained the line capacity and the factors that influenced the load on the line. Learners identified that the line had insufficient capacity to handle peak demand but, more importantly, they identified the circumstances that affected this. Learners were able to identify that congestion occurred when a particular mixture of products passed along the conveyors. The operations team presented some challenging questions to learners in the light of this evidence. In particular they asked for a range of solutions to be presented at the next meeting.

Teachers, with a member of the company operations team acting as a mentor, held a classroom brainstorming session and explored a wide range of possibilities. Some of these ideas took learners back to the factory to validate their original assumptions and to question operators further about the process and timings of the products on the line. The learners presented some possible options to the operations team back at the factory. These focused on design solutions to speed up the conveyors, while at the same time ensuring that the end-of-line process of placing the products on pallets could handle the increased volume. However, the Nestlé team suggested that they would prefer a solution that avoided making any changes to the line as these would involve further investment.

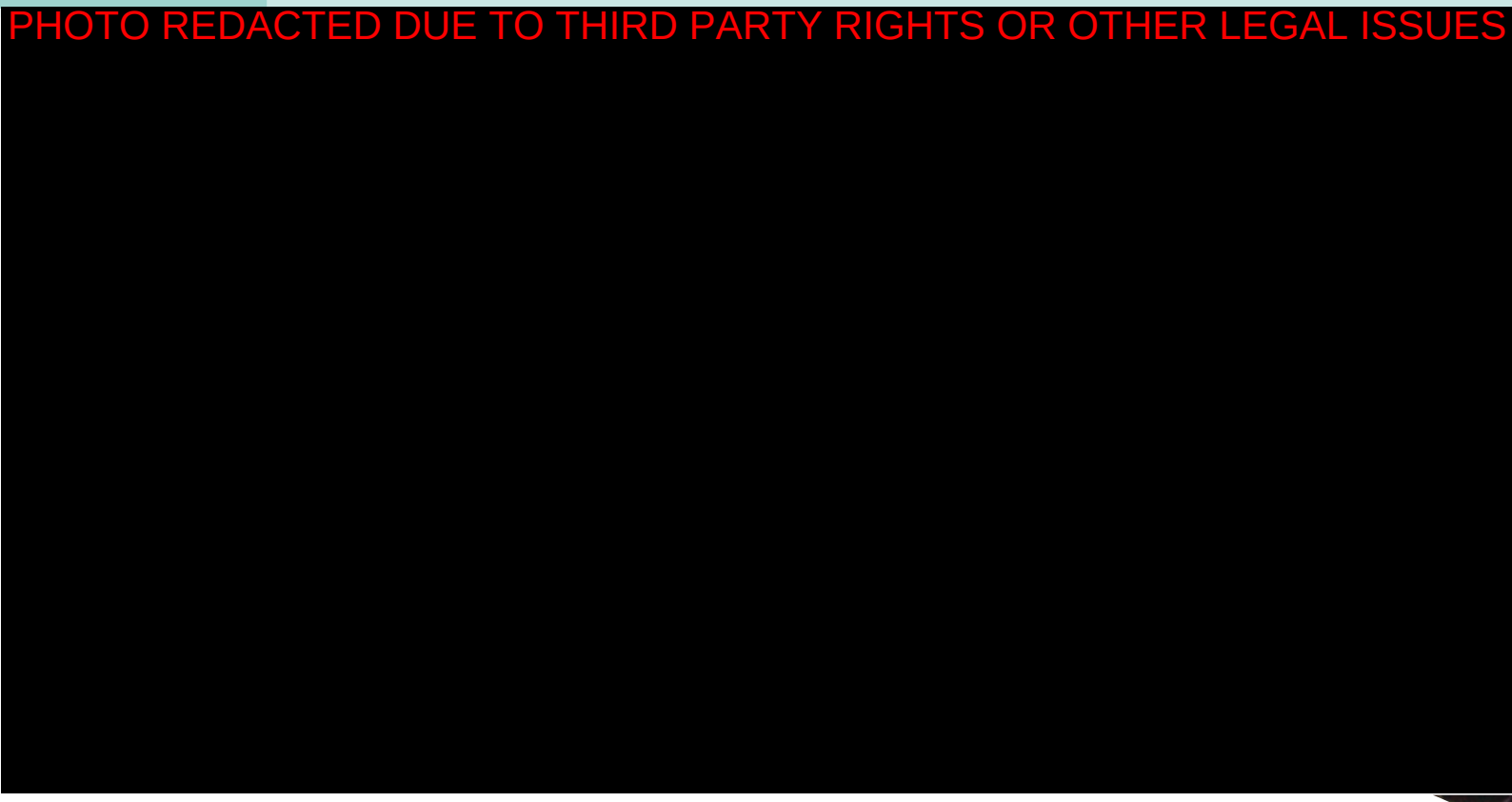
The learners returned to the classroom and looked again at their data. They were able to suggest a production sequence that meant the mix of products that caused the peak load was eliminated from the production run. They validated their thinking with the Nestlé scheduling team and proved that this solution worked. A final presentation was made to the company operations team. Having unearthed a number of process issues through their investigations, learners were then encouraged to work alongside the company operations implementation team, who were responsible for executing some of the learners' original proposals.

The learner outcome

The project encouraged the learners to look for different options, balancing the impact of one against another. It also gave them an opportunity to explore the economic analysis necessary for design solutions. Their interaction with the company operations team required an approach that was professional, robust and realistic. Learners were challenged throughout the process by the need to justify and validate the information they were using. As a result, they became aware of the need to base decisions on secure data and reliable information.

CASE STUDY

10 Foundation Diploma in information technology – Djanogly consortium



Summary

Learners devised marketing and media solutions for a fast food trader and a local rock band.

The applied learning activity

Teachers planned a series of business challenges that explored the needs of real business and asked learners to deliver IT solutions to meet those needs. By delivering the Foundation principal learning units together, learners were exposed to the interdependency of business functions, business dynamics and the impact of IT on business performance.

The first business challenge, which spanned six weeks, required learners to identify potential marketing avenues for a client whose aim was to develop a fast food company.

The initial activity involved a group session with the client, during which the business challenge was explained. A brainstorming session took place, guided by the client and teacher, to identify the objectives of the communications campaign. It focused on business needs, the target audience, the objectives for the campaign and the range of IT solutions that the learners could explore.

Learners were organised into small research teams and asked to identify roles and responsibilities, which involved them using small focus groups, questionnaires, internet search engines and competitor analysis. Learners were encouraged to develop their communications skills through sharing ideas and discussing concepts with business professionals and the public. Having researched the market, learners drew conclusions and made recommendations for the client's IT requirements.

Investigating the marketing and communication approaches, learners explored costs with a range of suppliers from e-commerce websites, radio advertising, fly printing, bus shelter posters and taxi adverts. The client maintained a close link with the learners, which gave them the opportunity to reflect and question the client further, ensuring the final product met the identified needs.

In the final presentation learners gave examples of the IT marketing and media solutions they were recommending. One group recommended the use of local radio adverts for the fast food delivery business. It engaged the services of a recording studio and developed a short radio advert as an example of a possible promotional device.

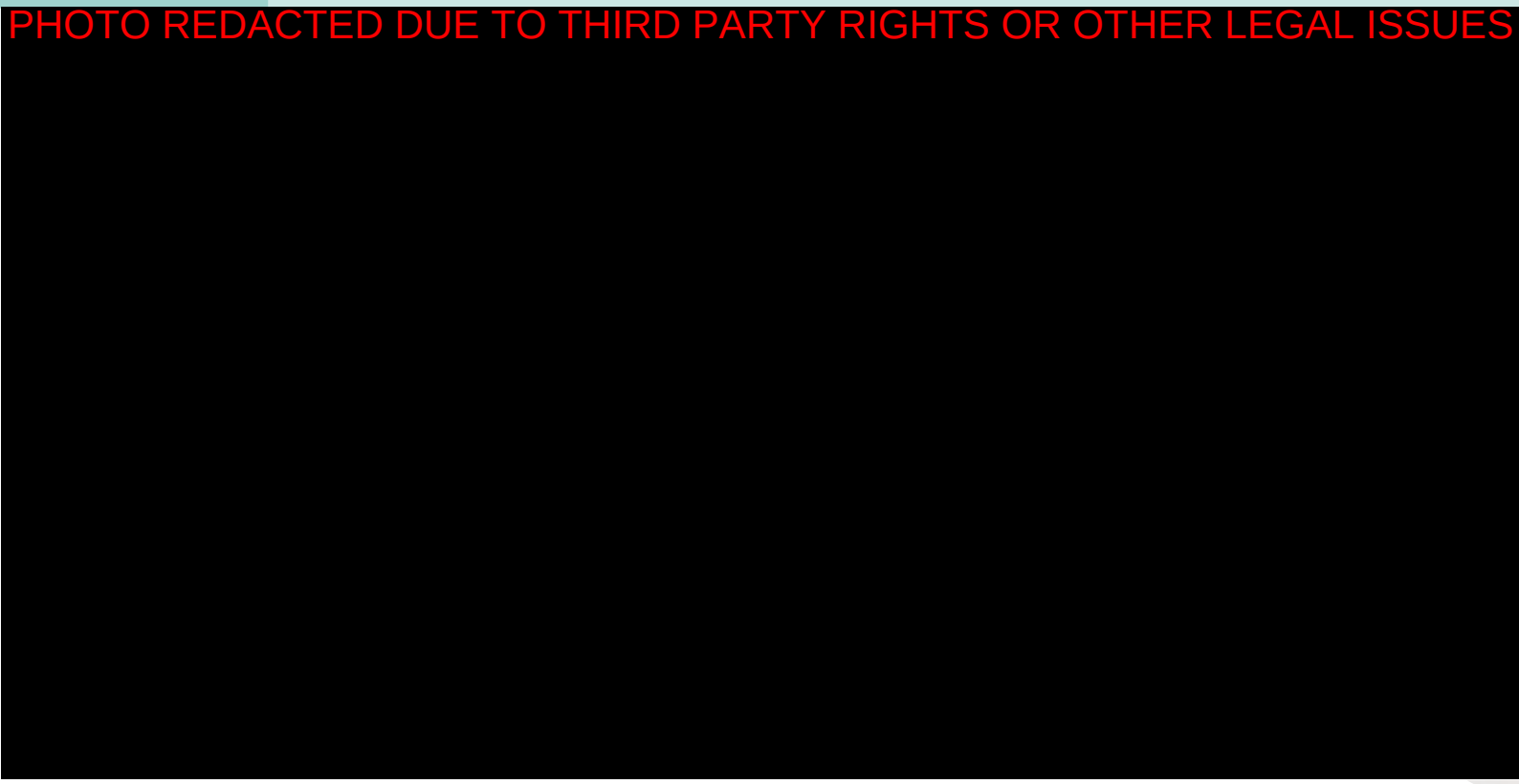
The second challenge required learners to research and evaluate two approaches to developing a promotional video for a rock band. Learners went to the Confetti Institute of Creative Technologies and were given basic exposure and training on iMACs to learn how to produce and edit their own video. They met with a recording studio expert who explained the technology requirements of a home studio. This provided the learners with hands-on experience of the IT equipment used in industry and its capabilities and applications. Learners were then asked to compare this equipment with their experience of using MS Movie Maker on a PC platform in a classroom situation. The learners made a formal presentation of their findings to the band.

The learner outcome

Learners increased their understanding of the complexities and dynamics of the technology that supports different types of business requirements. Learners worked in small but highly effective teams to complete their tasks.

CASE STUDY

11 Higher Diploma in information technology – Lewisham consortium



Summary

Learners worked on a multimedia product for three- to five-year-olds that involved working with teachers, mothers and toddlers from a local primary school. They showcased their ideas in a presentation to local business leaders.

The applied learning activity

With Lewisham College acting as the commissioning client, learners were required to work on a multimedia product in the form of an educational story book for three- to five-year-olds. Learners were expected to develop the product using a range of multimedia software packages, including Flash, Photoshop and Dreamweaver. The college recreated the interdependencies of IT and its impact on business functions in developing themes that spanned several principal learning units.

Learners researched existing products and created a product specification and formal project plan. Their research was extensive and included desk-based investigation on educational websites and visits to local and national businesses that were creating products of a similar nature, such as the BBC, Pixar and Disney. This primary research enabled learners to evaluate existing products and review the structure, design,

accessibility and features of the products. Along with a detailed review of the specifications of a range of products, the outcomes also provided the basis for learners to scope their own product for development.

Learners spent time talking to the client group, primarily mothers and toddlers. However, after receiving some very comprehensive feedback from mothers who wanted the focus of the product to be linked to the national curriculum, the groups widened their primary research to include primary school teachers. To ensure a consistent level of feedback, learners set up a series of focus groups in the local primary schools. They observed children using the products and asked them what they would want from an interactive multimedia storybook. Learners also spent time in primary school lessons, developing an awareness of the requirements of the national curriculum.

Back at the classroom learners used their primary research to build prototypes that were then tested at the primary schools with the same set of toddlers. Once again feedback was crucial so that the final products for exhibition could be chosen from the prototypes. Learners considered costing implications at each stage, from building the prototypes to completing the final exhibition products.

Learners designed an exhibition stand that showcased their proposed educational storybook. Teachers and children from local primary schools were invited to test out the content and give feedback for further development. Using a similar format to that on the TV programme *Dragons' Den*, the second and final stage of the presentation involved local business leaders and teachers accessing the finished multimedia products. Local media and business organisations had to decide whether they would invest in the final set of products. Throughout the presentation learners were asked challenging questions regarding the financial viability of the products chosen for manufacture.

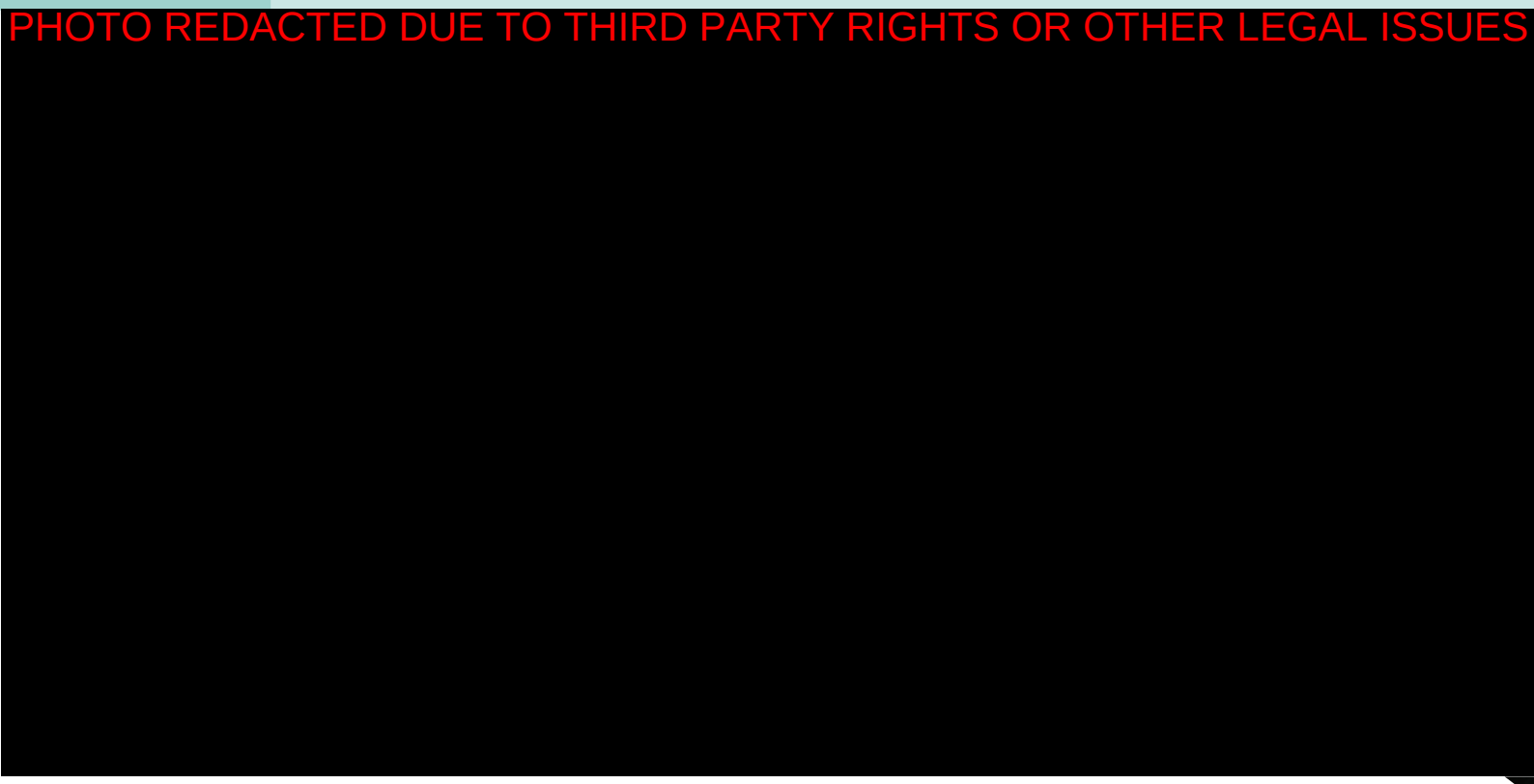
The learner outcome

This activity encouraged learners to be creative and entrepreneurial within a real working context. The emphasis on the financial constraints, and the focus on the return on investment, gave learners a very clear insight into the 'added value' that businesses expect from IT solutions in order to gain a competitive edge with their products.

CASE STUDY

12

Advanced Diploma in information technology – Reading and central Berkshire consortium



Summary

Learners explored the role of a multinational IT company in the development and application of new technologies. They investigated the requirements of local businesses and put forward new IT solutions.

The applied learning activity

Advanced Diploma principal learning activity was supported by strong links with Microsoft Corporation. Advice from the company led to the decision to blend unit 1 'The potential of technology' and unit 2 'Understanding organisations'. For unit 1, learners considered the impact and contribution of IT to society, organisations and individuals, with a focus on the impact of Microsoft's global business. In unit 2, a visit to Microsoft gave learners the opportunity to review and reflect on the company's organisational structure.

To prepare for the visit, learners considered their own objectives for the day, the questions they needed to ask, the areas of the business they needed to visit and how the information received would be recorded. Working in groups they set each other tasks, which would ensure an effective use of the time spent onsite.

In preparation for the visit, Microsoft presented an overview of the organisation. This focused on the contribution of IT to society and Microsoft's role as a global player in the IT market. The presentation also included aspects of internet safety.

During the visit to the company, learners met with heads of all the business functions for a Q&A session. Informed by the dialogue with professionals from the company, learners then discussed and debated issues with an insight into the thinking of a large global organisation. Learners broadened their understanding of how IT supported and underpinned operational activities with its global presence across a range of technologies.

Learners were given a tour of the Microsoft building, including access to the showcase technology room, where they met with Microsoft employees to discuss the impact of IT on business in general. Learners considered the future of IT and discussed its impact on the structures of businesses and the role of IT in business.

Learners made a final presentation to Microsoft employees, who made themselves available as assessors for the activity. Choosing an industry sector and using a variety of media, learners gave employees a glimpse into the future of IT from their perspective and its impact on the business sector they had chosen. Several learners focused on the music industry, using role play to demonstrate the impact of possible new technology on the customer and on the structure of the industry.

The visit to Microsoft was followed up in the classroom, where learners used the insights from the discussion on the future of IT to talk about the impact of new developments on local businesses in the area. Each group of learners focused on a different business sector and collected evidence of the way in which the businesses currently used IT. They then suggested how the businesses might approach IT solutions to improve their future effectiveness. With several visits to the local businesses, learners were able to understand their current processes and this gave them the insight to mock up future IT business processes for them. The information from this activity was used as material for a presentation to the local chamber of commerce, which gave business leaders an insight into the impacts of IT on small local businesses.

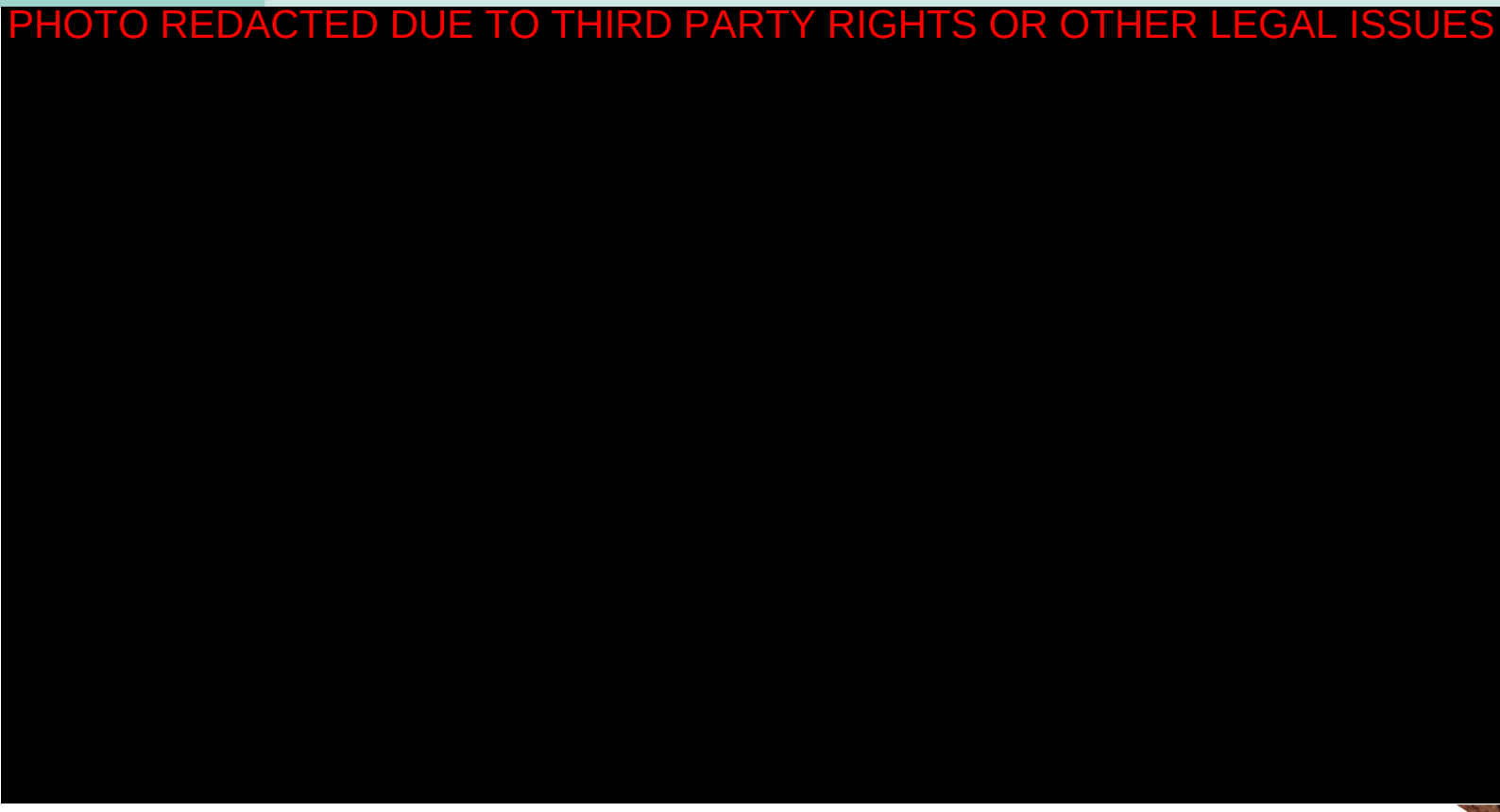
The learner outcome

These activities were designed to develop, promote and extend learners' knowledge and skills, and were assessed formatively with support and input from the employer. Learners were given the opportunity to work as individuals and as part of a team in an external setting to develop insights into professional processes and practices.

CASE STUDY

13

Foundation Diploma in society, health and development – Goole Howden and Snaith consortium



Summary

Learners were introduced to the key values and approaches used in the care profession. They used this knowledge to write a good practice guide for a care home and evaluate the safe care of babies in a nursery environment.

The applied learning activity

Selby College initially focused on unit 2 'Exploring principles and values'. Learners on the Foundation Diploma took part in a mix of simulated activities and site visits to develop their skills in and experiences of the care sector. Learners were expected to apply the values of dignity, respect and independence to client-simulated and contextualised activities. As learners worked together they became more confident and began to share their emotions and experiences with each other. In doing this they developed a real insight into the values that underpin high-quality care.

The key objective of the assignments was for learners to recognise the relationship between key values and the approaches used in the care profession.

Introductory sessions covered ethos, context and breadth of health and social care provision. Learners visited a residential care home and a childcare centre.

In the residential care home learners applied the principles and values they had learnt to the care setting. After a tour of the home and a talk with people who use the service, learners returned to the classroom and took part in simulated activities. This enabled them to experience the care activities they had observed in the home. Working in pairs, learners could choose from being fed a meal, being taken out in the community in a wheelchair, having their vision impaired by vision-distorting glasses or being given a simulated bed bath. Their partners would then, to the best of their ability, replicate the type of activities undertaken by the care professionals. At the end of these activities learners immediately recorded their feelings and emotions as they were looked after by their partner. In particular they were asked to reflect on the three values of dignity, independence and respect.

Learners shared their emotions and reflections with others in small groups through role play and Q&A sessions. Learners were then asked to think about the services they had observed and write a good practice guide based on their own experiences for new and existing carers. These guides were given to the professionals in the care home for their comments and feedback.

In the second assignment learners experienced a different care setting where they applied the same principles and values in their decision making process.

On a visit to a nursery, learners watched a training video put together by nursery staff. They were asked to evaluate the safe care of a baby in a nursery environment. Through observations they made on the visit and a Q&A session with staff, they were able to recognise care procedures for nursery staff in charge of babies.

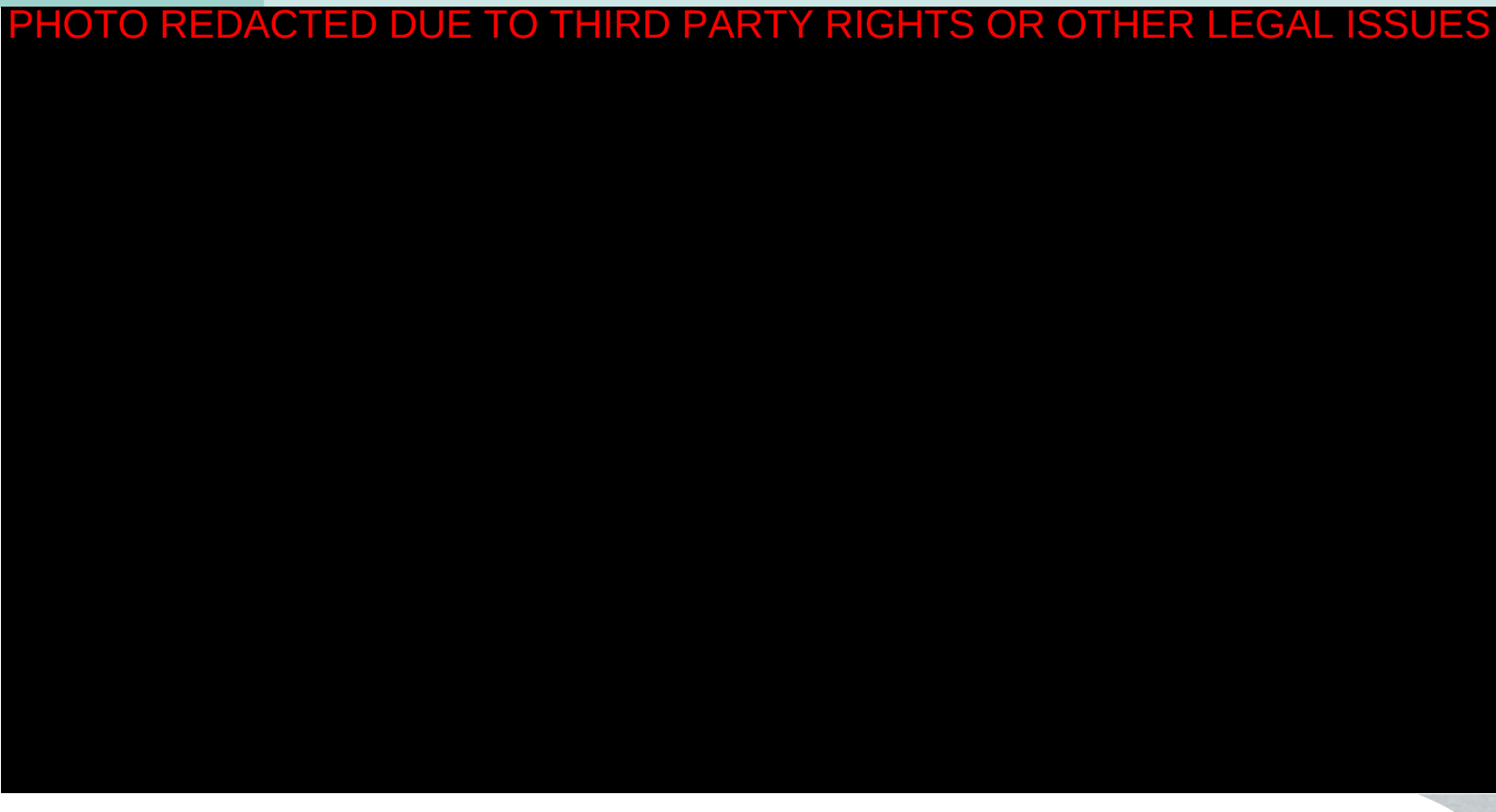
The teacher used Persona dolls to replicate the kind of experiential learning similar to that used in the nursery. Learners spent two sessions creating identities and histories to give their doll a persona in order to build a relationship and bond.
The dolls linked key sector-related themes such as communication and working safely to protect individuals.

The learner outcome

Learners experienced first-hand the care sector themes, such as communication and working safely to protect individuals. Learners produced a good-practice guide for people who use the service.

CASE STUDY

14 Higher Diploma in society, health and development – Barnsley consortium



Summary

Learners undertook health and safety risk assessments in a professional setting and contributed to the development of nursery teaching resources. They planned and organised a nursery visit to the Christmas pantomime.

The applied learning activity

Barnsley consortium gave learners the opportunity to work in a variety of care environments. Supporting unit 4 'Growth, development and wellbeing' and unit 7 'Supporting children and young people', teachers teamed up with Take Two Training, a local training centre and a childcare nursery. Learners worked either with children in the day nursery or with young children in the breakfast and after-school clubs. This work placement set the context for a variety of tasks and assignments for learners to build their skills and increase awareness of different care environments.

A key objective for the placement was that learners would develop practical hands-on skills to contribute to the care and development of young children. Working alongside nursery staff, learners were assigned to undertake particular roles that included developing the teaching resources for the nursery, designing classroom learning

activities and undertaking health and safety risk assessments for new outdoor play equipment. Having planned the activities with the nursery staff, the Diploma delivery team was able to personalise learner assignments to suit the tasks and responsibilities the learners were given in the nursery.

As part of their work, learners were also expected to work as a team on developing ideas for a major activity involving the organisation, planning and delivery of a nursery visit to the Christmas pantomime in the city.

The activity was planned alongside professional input to incorporate all of the necessary steps leading to the successful outcome of the visit: communication with parents, analysis of the health and safety aspects, organising the necessary transport, booking the tickets and organising the food. Learners discussed their ideas with children from the nursery. They worked in groups to organise and plan the outing, making sure that the children were familiar with the pantomime story. The learners' planning, preparation and organisation led to a very successful outing for the nursery children.

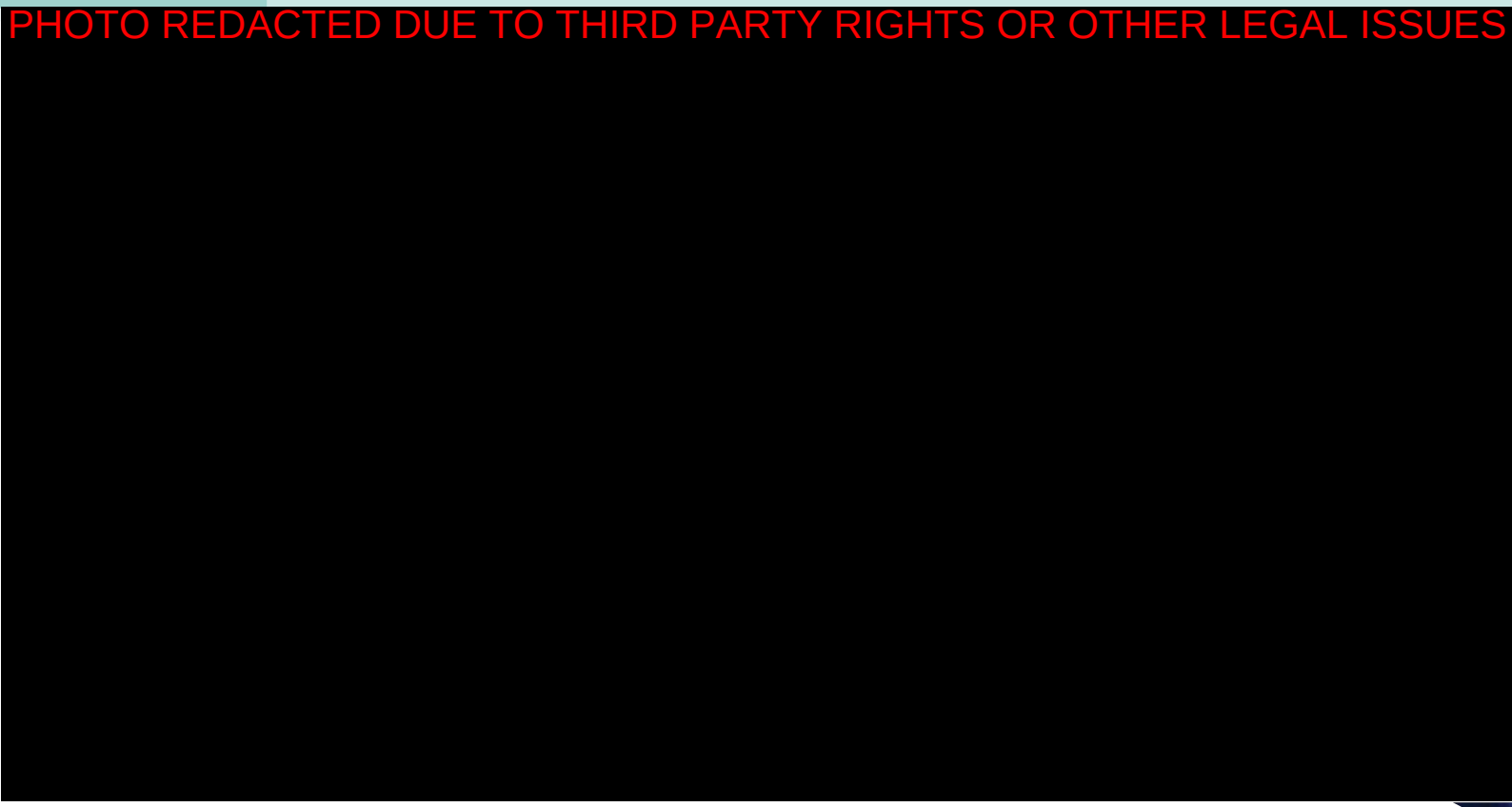
Back in the nursery learners shared their reflections and evaluations of the event with nursery staff. They asked parents to give feedback on the organisation and realisation of the whole activity. In the course of the activity learners recognised the importance of critical issues such as safety, giving clear instructions and planning every last detail. The 'reality' and 'responsibility' factors were very clearly understood by learners as they developed their awareness of the scope of the activity.

The learner outcome

This activity gave learners a sense of responsibility for the tasks they undertook in a care setting. The ability to shape an experience enabled learners to think creatively and challenge current methods. This developed them as learners and also extended their awareness and understanding of others.

CASE STUDY

15 Advanced Diploma in society, health and development – Dewsbury consortium



Summary

Learners analysed the care of the 0–5 age group and worked towards improving the aftercare of patients in a hospital's oncology department.

The applied learning activity

Learners following the Advanced Diploma were required to replicate and apply their growing skills and knowledge to the professional workplace. Teachers recognised that to achieve this, learners needed to have access to environments where core professional values and approaches were evident. Working alongside professionals inspired learners as it provided the opportunity to build relationships that offered them significantly different perspectives from those fostered in the classroom environment.

Focusing on the care of the 0–5 age group, learners worked in simulated environments with programmable e-babies. Teachers could reprogramme the babies to mimic illness, discomfort and general need of comfort to suit the different activities, personalising the programme for each learner. Printouts then recorded the levels of care, the types of decisions made by the learners and the effects of those decisions on the babies. Learners took the babies out into the workplace where they worked alongside

professionals to reflect and evaluate the decisions made. Learners were able to track the critical path of their decisions in terms of the effects of good and poor practice.

In a separate project teachers worked in partnership with a local hospital. Learners started with a series of initial activities and small assignments for the 'Safeguarding and protecting individuals and society' unit. This carousel of activities enabled learners to understand the social and structural environment of working in a hospital.

Learners researched the aftercare for oncology patients and their treatment in the hospital. Working under the supervision of care professionals, a series of focus groups was instigated, followed up with individual interviews. Using paper-based investigations and data analysis, learners developed a prototype for a new patient aftercare guidance document. This document was designed to give patients the most up-to-date information and advice. Its effectiveness was evaluated by the hospital professionals.

The learner outcome

Learners reflected on their own decision making process for the care of the 0–5 age group and made comparisons with the procedures they had seen in a professional setting. Working with care professionals from a local hospital, they researched and produced an aftercare information document that was shared with patients.

About this publication

Who's it for?

This publication is primarily for teachers and lecturers delivering Diploma principal learning qualifications, but may also be of interest to consortia managers, curriculum planners and employers engaged with Diploma consortia.

What's it about?

This publication is about applied learning in Diploma principal learning. It describes how applied learning sits within the Diploma, and contains 15 case studies that illustrate applied learning at each level for Diplomas in construction and the built environment; creative and media; engineering; information technology and society, health and development.

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ISBN 978-1-84721-933-6

Order ref QCA/09/4149