PROTOTYPING FUTURE DIRECTIONS IN FASHION-TECH

A Knowledge Exchange Project

INTRODUCTION

New technologies, shifts in social and cultural attitude, and environmental factors are continuously impacting how fashion is designed, manufactured, distributed, and communicated. Consequently, the industry requires fashion graduates to demonstrate an ability to identify, anticipate and respond to these changes using critical thinking and design frameworks that facilitate creativity, innovation, problem-solving, communication and collaboration.

Facilitated by the Higher Education institution, Knowledge Exchange (KE) is the generation and sharing of knowledge with external partners or organisations for societal, cultural or economic benefit.

Significantly, the exchange of industry knowledge with student knowledge presents an opportunity for the generation and co-creation of new knowledge between the two parties. Specifically, it opens up an all- important arena for students and industry to jointly address the dynamic challenges posed by the fashion industry, and in response, prototype new services, roles and products required for the future of the industry. Thus, KE can be argued to have an integral role to play in developing innovation, entrepreneurship and enterprise across the breadth of the fashion sector and related disciplines.

UNIT OUTLINE

Working alongside a selected industry collaborator, students will research, ideate, prototype and present speculative prototypes addressing current industry-specific technological, social, cultural or environmental insights. These prototypes can be in the form of a presentation of a concept or physical prototypes, envisioning new directions for industry in the field of fashion-tech.

This exchange of knowledge enables students to value their knowledge and experience by responding to an industry-defined research question. Additionally, it provides students with the opportunity to work alongside industry in a simulated professional environment.

The students should work in groups (maximum 6 per group) to enable them to develop teamworking capabilities, collaborating in interdisciplinary groups and assuming individual responsibility for tasks. See Teacher's Toolkit, Tools 3 'Interdisciplinary group working; and 9 'Self-directed learning' (available at https://www.e4ft.eu) for support here.

The three key elements for implementing this KE Framework:

1. Co-designing a project brief with a selected industry partner

Prior to the delivery of this KE project, it is important to have selected a fashion-tech industry

collaborator and together with them, have defined a central research question that is mutually relevant to both students and industry. The industry partner will use their industry experience to frame this as a problem or opportunity for example: 'how might you deliver an omni-channel luxury retail experience using extended reality (XR) technology?'. This question, along with industry insights will be presented to the students at the beginning of the project.

2. Conducting an 'insight generation' workshop with students

At the beginning stage of the project it is crucial to conduct an 'insights generation' workshop with students, which can be structured in the form of focus groups of about 4-6 students. This will allow students to empathise with the area of investigation and identify insights from their own lived experience to drive the development of their designed prototypes. Educators and the industry partner act as facilitators to these workshops. Requesting the students to audio record and transcribe these focus group conversations, introduces them to important qualitative primary research methods. It is important for the educator to prepare a series of questions or prompts to drive the conservation of the focus groups, especially if this is a new research method for the students. In order to gain more affective insights, it is useful to include questions related to how a certain topic, theme or technology 'feels'. For example: 'how does purchasing items online make you feel? Publications such as Sarah Pink's Doing a Sensory Ethnography (2015) might be a helpful to consult prior to conducting this workshop.

3. Using a Design Thinking framework to structure the delivery of the project.

Four stages of the Design Thinking methodology are used as a framework for the delivery of this KE project: observation, ideation, prototyping and testing (as detailed in the table below). The timeframe over which these stages would be delivered can be adapted to suit a shorter or longer-term investigation. For example, a shorter 5-day project will produce faster responses to the investigation, while a longer 10-week investigation would produce more in-depth insights and solutions. This design framework will provide a solution-based approach to answering the research question that has been defined by the industry collaborator.

Stage	Theme	Suggested activity
1	Observation: understanding the human needs involved	Presentation of industry insights, focus groups with students, desk research, identifying insights
2	Ideation: generating ideas in response to the defined problem or opportunity	Brainstorming workshops, concept generation
3	Prototyping creating iterations of the chosen idea	Simulations, creating mock-ups, making models
4	Testing: testing the proposed idea	Presentation to industry collaborator for feedback, evaluation of outcome and collaborative working

INDICATIVE CONTENT AND TEACHING AND LEARNING METHODS

This unit of learning is taught through a combination of lectures, workshops, supervised studios and technical delivery. Students will have access to formative feedback throughout the unit during supervised studio sessions and live summative feedback from industry in the final presentations

Workshops: suggested titles:

- Designing, implementing and evaluating focus groups
- Design ideation
- Design prototyping
- Professional presentation skills

Lectures: suggested titles

- Technological, social, cultural and environmental trends
- Insights and innovation
- Quantitative and qualitative research methods
- Design thinking methodology case studies (a range of case studies can be found at: https://thisisdesignthinking.net/category/cases/)

ADDITIONAL TUTOR'S NOTES

Further guidance on structuring workshops for this delivery can be found in the Teacher's Toolkit, Tool 2 'Workshops' > 'Design and Ideation' (available at https://www.e4ft.eu).

See Teacher's Toolkit, Tool 2 'Workshops' > 'Research for Fashion-tech' for further information on conducting Focus Groups (available at https://www.e4ft.eu).

This unit could be delivered independently, or following the 'Qualitative and Ethnographic Research Methods' and 'Identifying Fashion-tech Opportunities' units. This unit could also be used as a framework to complement the 'Wearables Technologies Workshop', and as a precursor to the 'Entrepreneurship and Small Business Start-up' unit.

LEARNING OUTCOMES

Upon successful completion of the unit the students will be able to:

1. Identify, analyse and critically evaluate the drivers of technological, social, cultural or

environmental trends using primary and secondary sources;
2. Demonstrate professional skills in presenting and communicating ideas in response to an industry-specific insight;
3. Develop a prototyped design outcome;
4. Critically reflect on their ability to collaborate on the delivery of a creative outcome.

ASSESSMENT METHODS

1. Verbal and visual project presentation to industry and academic facilitators with supporting evidence of research, design development and prototype.
2. Reflection and evaluative written statement on project outcome and collaborative work experience.

READING AND RESOURCE LIST

Essential Reading

Ambrose, G., & Harris, P. (2010) Design Thinking for Visual Communication. 2nd ed. Lausanne, Switzerland: AVA Publishing.

Dunne, A., & Raby, F. (2014) Speculative Everything: Design, Fiction, and Social Dreaming. Cambridge, Massachusetts: The MIT Press.

Raymond, M. (2010) The Trend Forecaster's Handbook. London: Laurence King Publishing Ltd.

Further Reading and Resources

Canton, J. (2015) Future smart: managing the game-changing trends that will transform your world. Boston: De Capo Press.

Dragt, E. (2017) How to research trends: move beyond trend watching to kick start innovation. Amsterdam: BIS Publishers.

Dunne, A. (2008) Hertzian Tales: Electronic Products, Aesthetic Experience and Critical Design. Cambridge, Massachusetts: The MIT Press.

Keys, T., & Malnight, T. (2014) The Global Trends Fieldbook. Switzerland: Strategy Dynamics Global SA.

Pink, S. (2015) Doing Sensory Ethnography. 2nd edn. London: Sage.

Schmiedgen, J., & von Schmieden, K. (2020) This is Design Thinking: https://thisisdesignthinking.net/category/cases/.