



<https://doi.org/10.7577/formakademisk.5408>

Lupu Ruxandra

Researcher (PhD)

University Jean Monnet

Ruxandra.lupu@univ-st-etienne.fr

Bardin Christophe

Professor (PhD)

University Jean Monnet

christophe.bardin@univ-st-etienne.fr

MOSAIC

designing context-appropriate methodologies for mapping craft skills

ABSTRACT

Craft teaching and learning are evolving today at an unprecedented pace, driving the need for skills that increasingly fuse tradition with innovation. However, mapping craft skills is complex, due to both the multiplicity of factors determining skill development and the uncertainty surrounding future developments. In this paper, we present the methodological approach designed for the MOSAIC project, an ambitious Erasmus+ that addresses the need for skills in arts and crafts through research, creation of innovative craft training, and the establishment of a craft observatory. Firmly grounded within the field of craft science research, the methodology is rooted in the theory of practice and deploys a participatory process to further explore crafts skill needs. However, to the purpose of this article, we focus on a particular methodological aspect, that is, how we use cultural mapping to explore the complex craft skill ecosystem and analyse the rich data sets collected through a mixed set of instruments. Cultural mapping involves the systematic collection, documentation, and analysis of information about cultural assets – here: craft skills – within specific geographic areas or communities. In MOSAIC, we use cultural mapping as an approach to establishing an analytical continuum between top-down (e.g. legislation) and bottom-up (e.g. industry) approaches to the analysis of skill needs in MOSAIC partner countries. This approach is a good example of a context-appropriate research strategy that reaches beyond the borders of disciplines. As such, it fosters a holistic approach to craft science research that speaks to craft researchers, educators, and policymakers.

Keywords:

craft education, craft skills, cultural mapping, data visualisation.

INTRODUCTION

The field of arts and crafts is constantly evolving, with new skills such as hands-on learning, problem-solving, and transversal skills emerging because of changes in technology, materials, and culture. These skills lead to positive outcomes for academic achievement and social-emotional development (Lillard, 2013; Edwards & Gandini, 2015). Among the core drivers of this shift are the maker movement (Martinez & Stager, 2013), the use of digital technologies (Sheridan et al., 2014), and project-based and collaborative learning (Pekrun et al., 2009). However, change does not take place in an equal manner. Although the industry must quickly gear itself towards new skills, education systems are not always fully prepared to teach these (Augsten & Gekeler, 2017). On the other hand, legislation influences the evolution of craft skills – for example, laws on ecology foster the need for green skills, and EU directives on digitalisation determine the upgrade of technical skills.

In addition to these factors, we face a high uncertainty surrounding future developments. We are training people for jobs that do not exist yet, and foreseeing the type of skills needed in crafts is becoming increasingly difficult. Which craft skills are fundamental in an increasingly complex work environment? Moreover, how can we develop comprehensive approaches for mapping skill needs? These questions represent the research focus for MOSAIC (Mastering Job-Oriented Skills in Arts and craft thanks to Centres of vocational excellence), a 4-year Erasmus+ project involving 15 international partners from 7 countries operating in arts and crafts and representing institutions such as VET centres (Vocational education and training), chambers of crafts and commerce, and universities. Conducting research into craft skills is the initial and core activity of the project that serves as a foundation for proposing innovative training and the creation of an observatory, which should carry on the project's legacy.

In this paper, we address the construction of a holistic methodology for mapping craft skill needs in MOSAIC partner countries. The MOSAIC methodology is grounded in the theory of practice (Bourdieu, 2000), which facilitates an approach to craft skills as the result of a specific and constantly evolving way to engage with the world (Schatzki, 2001). This theoretical framing enables us to use methods from fields as diverse as ethnography, social sciences, and management. At the same time, it generates a wealth of heterogenous data sets that require different analytical tools and complex interpretation approaches that do not treat findings in isolation but rather as interconnected. To the purpose and within the limits of this article, we discuss the potential for using cultural mapping to create a dialogue between heterogenous data sets that map craft skills from various perspectives.

The paper is structured as follows. In the methodology section, we provide a quick overview of the MOSAIC research ecosystem, including the heterogeneity of the tools and methods used. We also discuss how applying cultural mapping principles to the collection and interpretation of data provides an alternative to standardised cultural industry methods. In the results section, we describe in more detail the different levels of analysis of cultural mapping that we identified for MOSAIC: macro, meso, and micro approaches. In doing so, we offer an overview of how cultural mapping can be applied to assess craft skill needs in a systematic way, with implications for local development. We also point out how this new perspective enabled us to apply less conventional analytical tools: Voyant and TXM software to identify patterns in heterogenous data sets and cartography for establishing a dialogue between different levels of analysis. This article provides a good example of a context-appropriate research strategy that reaches beyond the borders of disciplines. As such, it fosters a holistic approach to craft education that speaks to researchers, educators, and policymakers.

METHODOLOGY

The central question of this paper is how cultural mapping can inform the design of a holistic approach to investigating complex craft skill needs that emerge in different geographical ecosystems. In doing so,

we draw on the MOSAIC project, which builds on the concept of ‘skills’ and whose main objective is to improve the quality of vocational training in the arts and crafts to meet the challenges posed by digital, environmental, and socio-economic developments by generating innovations from three angles: technical, educational, and social. In this article, we understand skill not only as mental representations or cognitive models but as the ‘developmentally embodied capacities of attention and response’ (Ingold, 2001, p.30). The theoretical framework chosen to address this issue is the theory of practice (Bourdieu, 2000), applied to consumption (Warde, 2005) but also considering devices, skills, and meanings (Shove & Pantzar, 2005) to integrate change and evolution. The theory of practice is best suited to understand craft practice through its characteristics – performance, routine, consumption, need, temporality, etc. – and based on its evolution in time (Feldman & Orlikowski, 2011). In fact, practices, craftsmanship included, result from change or from the interrelationships of several phenomena. To better assess the interdependent knowledge emerging within these communities of practice (Wenger, 2004) and the way in which it fosters the need for skills, we adopted the lens of cultural mapping.

Cultural mapping involves the systematic collection, recording, analysing, and synthesising of information about cultural assets such as resources, networks, links, and patterns within specific communities or geographical areas (Pillai, 2022; Philip, 2020; Stewart, 2007). Whereas early forms of cultural mapping refer to maps and inventories that record and represent cultural features and resources, more recent approaches have evolved and put an increasing emphasis on community engagement, interdisciplinary collaboration, and the use of digital technologies. This methodology continues to evolve, adapting to changing contexts while contributing to the understanding and preservation of cultural diversity and heritage (Cabeca, 2018). Cultural mapping recognises that culture is dynamic and multifaceted and seeks to capture and represent the complexity of cultural expressions and identities, including intangible ones (Comunian & Alexiou, 2015). Therefore, it can be deployed as an instrument of development (Freitas, 2016). We refer here to development in its global understanding, circulating as part of different models based on both economic and social indicators. In this context, cultural mapping is well suited to explore the emergence of craft skills. This approach fits very well within the general framework of practice theory, as it enables the identification of the instances of the cultural phenomenon (in our case craft skills) through the links involved in practice – the understanding, rules, and teleoaffective structures or commitments (Schatzki, 2001) established through craft practice. As MOSAIC is a work in progress, we will focus here on describing and visualising how we used cultural mapping as a lens to set up a context-specific method for exploring craft skill needs across partner countries.

RESEARCH DESIGN

This research was designed according to the following steps, which were guided by the cultural mapping process:

1. Identification and involvement of stakeholders: First, we identified the types of stakeholders engaged in MOSAIC – VET centres, chambers of commerce, craft businesses – and how their interactions drive the need for specific craft skills. We then involved them in the cultural mapping process, ensuring their active participation, input, and ownership in data collection. The participatory action research process (Okoko, 2023) was essential for communicating with and involving all project partners in the process.

2. Selection of cultural mapping instruments and data collection: Data collection was organised around four main themes, each representing a fundamental factor driving the formation of craft skills: environmental sustainability, social inclusion, new business models, and digitalisation. This silo structure made it possible to collect a large amount of data, allowing us to conduct both quantitative and qualitative analyses. For data collection, we used instruments trialled in the field of social sciences and management – one online, structured questionnaire for art and craft businesses; 4 months of desk research conducted in collaboration with project partners (through which we gathered over 250 documents); six focus groups with selected craft business owners; 22 case studies collected through the process of mapping

of good practices inside project partner institutions; and 50 evaluations of VET teachers' digital skills using the SELFIE FOR TEACHER self-evaluation instrument. The desk research process was the lengthiest one and produced a sufficient number of documents (over 250) of different types: research papers/books/reviews from Google Scholar and Scopus, legislation at the EU and national levels (MOSAIC partner countries), local press releases issued by craft magazines/online networks, statistics and market studies/reports produced by national and local administrations, and promotional materials posted online by craft companies in MOSAIC partner countries. When the need arose, we also conducted interviews and workshops and tested out more experimental approaches, such as keeping diaries (autoethnography).

3. Documentation, analysis, and interpretation: We then analysed the collected data to identify patterns, trends, relationships, and connections within the craft landscape. In doing so, we organised the complex research ecosystem on different levels: the macro level (context) provided through desk research activities, which draw on ethnographic approaches (Wutich & Brewis, 2019); the meso level, looking at new education systems through desk research (Logan, 2020), and the micro level that interrogates craft stakeholders on their needs through a mix of qualitative tools – questionnaires, focus groups, and case studies (Jordan, 2018). The progressive work conducted on different levels enabled us to bring into dialogue very different data sets by applying various methods for analysis – qualitative coding methods, such as template coding (Blair, 2015) and factorial analysis (Yong & Pearce, 2013) and variance analysis (ANOVA; Gelman, 2008) from statistics, were combined with less traditional methods coming from lexicometry (Scholz, 2019), semiotics (Nesterov, 2021), and management. Lexicometry deals with measuring the frequency with which words appear in the text (Scholz, 2019). Semiotics analyses the way in which images communicate messages (Curtin, 2009). Knowledge mapping is a management tool used in organisations to analyse procedures, concepts, and competencies, but its field of application is broader (Balaid et al., 2016).

4. Mapping and visualisation: We then translated our analysis into visual representations, such as graphs, diagrams, tables, and infographics. The three-dimensional model of analysis (Freitas, 2016) enabled us to bridge the gap between the two common approaches to cultural mapping: one that is top-down and instrumental because it is dominated by a utilitarian approach to development, understood in terms of economic growth, and the other, which is bottom-up because it builds on the link between society and culture and is driven by concerns of human development. To this we added a third perspective (meso) that mediates between the two ideal-type approaches and establishes a dialogue between them. The meso perspective facilitates a cartographic approach (Suchan & Brewer, 2000) to mapping the skill needs ecosystem.

5. Utilisation and planning: Cultural mapping findings and insights inform, among others, decision-making, policy development, urban planning, tourism strategies, cultural development initiatives, and community-led projects. In the case of MOSAIC, the results obtained through the mapping of skill needs across the project's four themes fostered the emergence of novel frameworks and strategies that can identify areas of strength, areas in need of support, opportunities for collaboration, and potential risks for skill development. In doing so, they inform decision-making and policy development.

In the next section, we focus on explaining the design of the cultural mapping approach, representing the foundation of the MOSAIC research ecosystem (Figure 1).

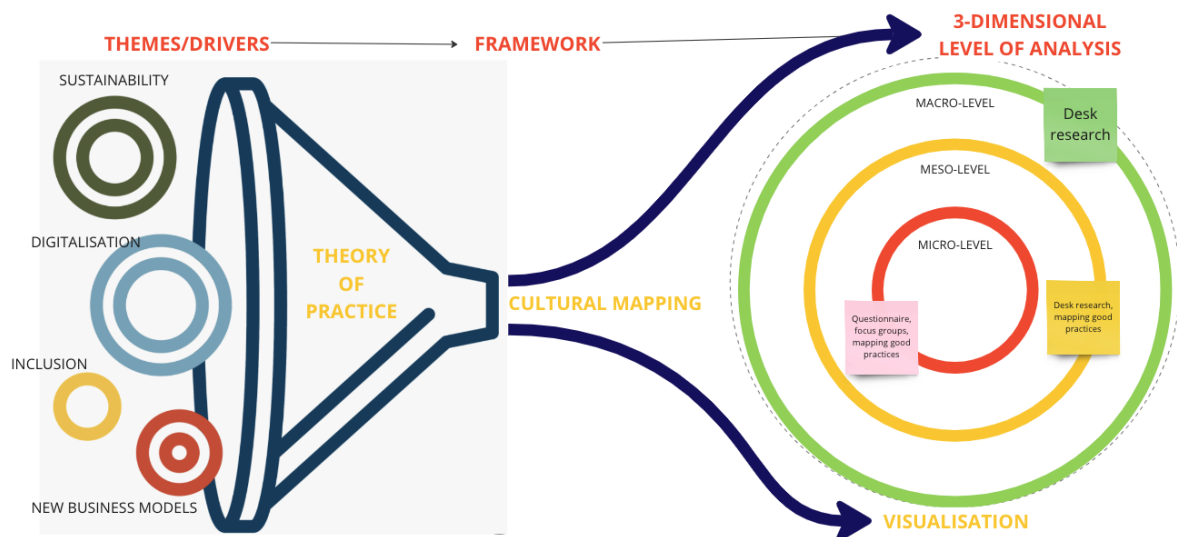


FIGURE 1. MOSAIC research ecosystem.

RESULTS

The setup of a three-dimensional level of investigation informed by the cultural mapping approach fit perfectly within the theory of practice and facilitated a polyvalent and efficient collection of contextual and empirical data, where different phases could run in parallel. Although cultural mapping is generally deployed as a practical participatory planning and development tool recognised and deployed by organisations such as UNESCO (Jeannotte, 2016), we adopted it as an emerging mode of research, as an inherently interdisciplinary and collaborative phenomenon. Cultural mapping enabled us to bring together in the frame of the theory of practice methods from disciplines as different as design, visual studies, ethnography, and management. Following the trajectory of academic inquiry – one of the five identified trajectories in cultural mapping (Duxbury et al., 2015) – this approach fit well with the *fluid* context of MOSAIC, governed by multiple working definitions of crafts across countries, as well as by a heterogenous partnership.

The macro level: Setting the scene for analysing craft skills

The macro level of investigation worked through a top-down perspective. This means understanding how the general legal and research context impact skill needs. To this aim, we worked with MOSAIC partners to collect relevant documents speaking about the four MOSAIC themes that drive craft skills. During the analysis and interpretation of these large volumes of data, we deployed digital software and mapping tools (Voyant/TXM) in combination with image analysis to create maps of knowledge that enabled us to identify laws and patterns in craft themes emerging across countries, as well as to uncover power relations impacting the formation of craft skills. (Figures 2 and 3).

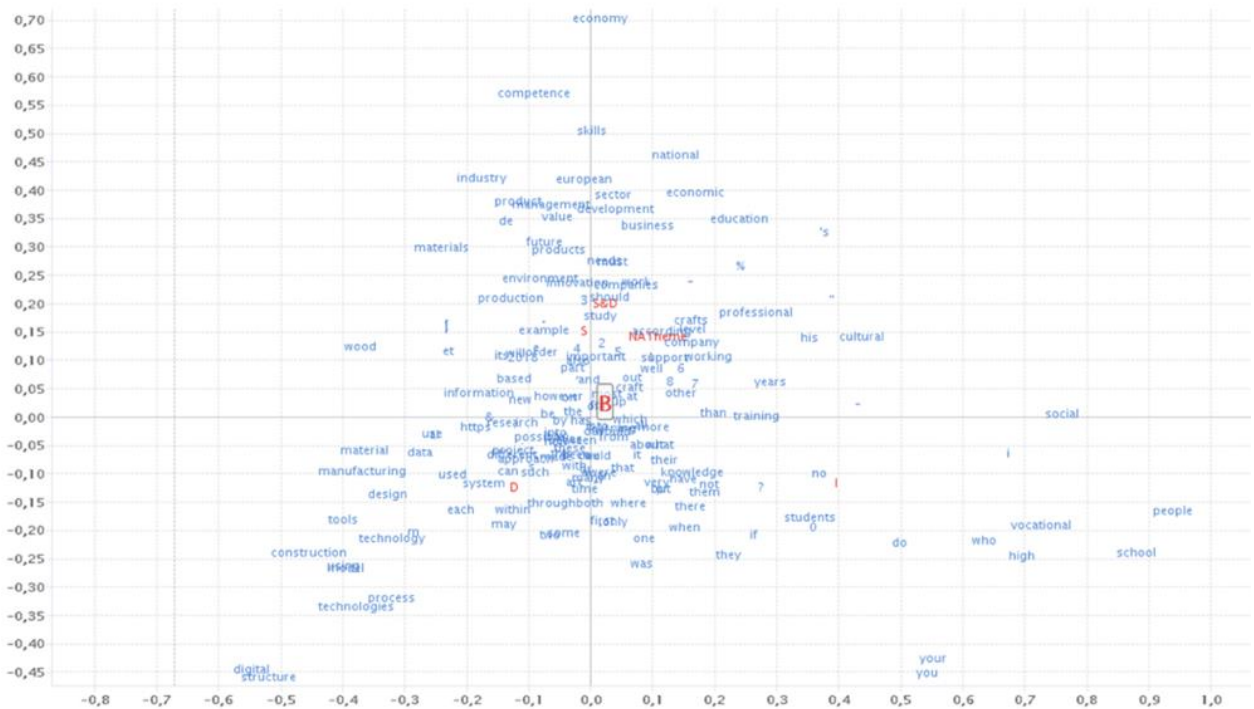


FIGURE 2. Scatterplot showcasing the lexical specificity of the MOSAIC themes.

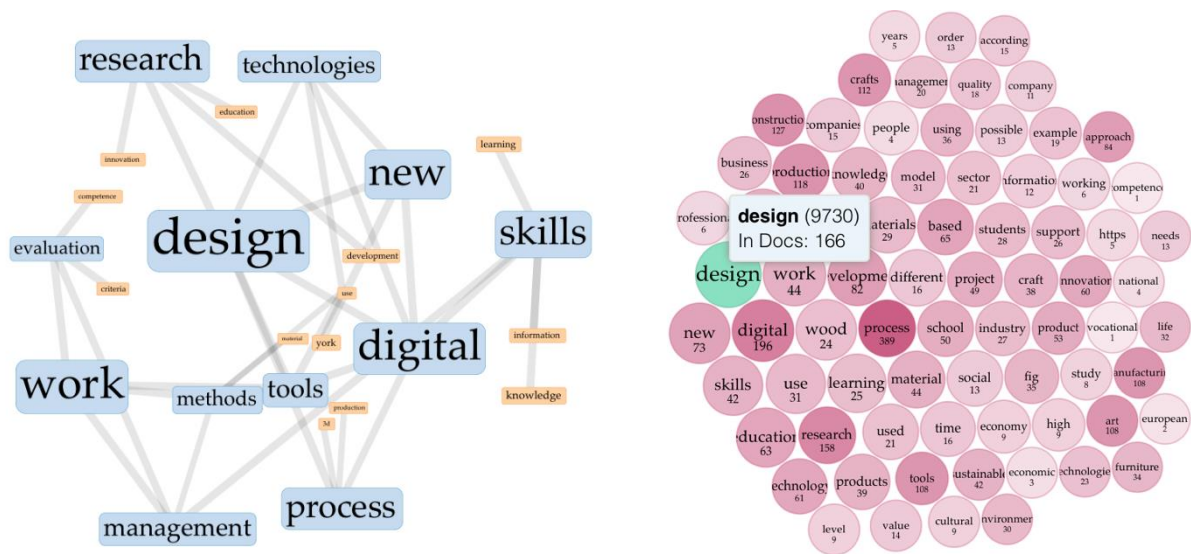


FIGURE 3. LEFT: Network map highlighting links between words; RIGHT: berry map indicating word frequency/connections.

The micro level: Understanding the industry approach

The micro level of investigation operated through a bottom-up approach, where the individual perspectives coming from the industry (i.e. VET and education centres, businesses, and chambers of crafts and commerce) informed the mapping process for skill needs. Using a combination of desk research, questionnaires, focus groups, and self-assessment tools, we collected data from these entities in the form of best practices, evaluations, and direct evidence supporting the need for specific skills. To analyse these data sets, we used a combination of statistical analysis and qualitative coding, which resulted in a variety of graphs, tables, and infographics (organised forms of visual depictions working

with symbols and other visual elements). Figure 4 offers some non-exhaustive data visualisation possibilities.

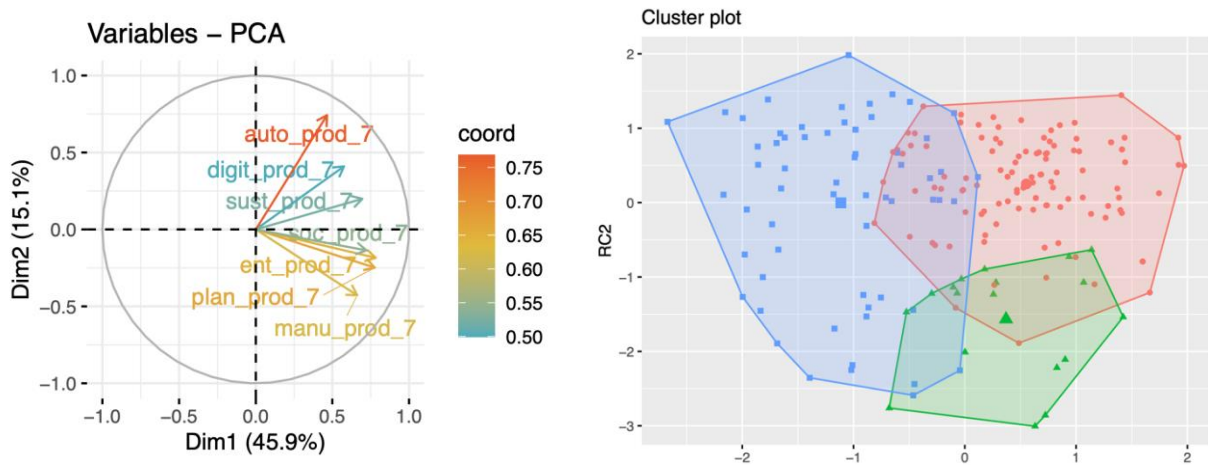


FIGURE 4. Factorial analysis and ANOVA to test the correlation and grouping of variables for the survey responses and the formation of groups of skills.

The meso level: Connecting the dots

As mentioned, laws do not always align with industry needs. To bridge this emerging gap, we conducted analysis on a third, intermediary level, where education models become the main object of analysis. Education models are enforced by ministries and governments through laws, and they are also driven by the activity of craft actors such as businesses and education bodies. For example, non-linear teaching (Härkki et al., 2023), maker-centred pedagogy (Laurell et al., 2021), co-creation methods (Kvellestad & Vatn, 2022), and incubators (Alkhaliwi, 2022) have already been adopted in education systems and officially integrated into curricula. They represent good examples of how legislation and industry intersect. For this stage, we used desk research aimed at identifying new education models through interviews conducted with MOSAIC partners. The identified models were grouped based on their area of impact – sustainability, digitalisation, inclusion, and new business models. Figure 5 exemplifies the visualisation of findings for the topic of sustainability, in the form of an infographic.

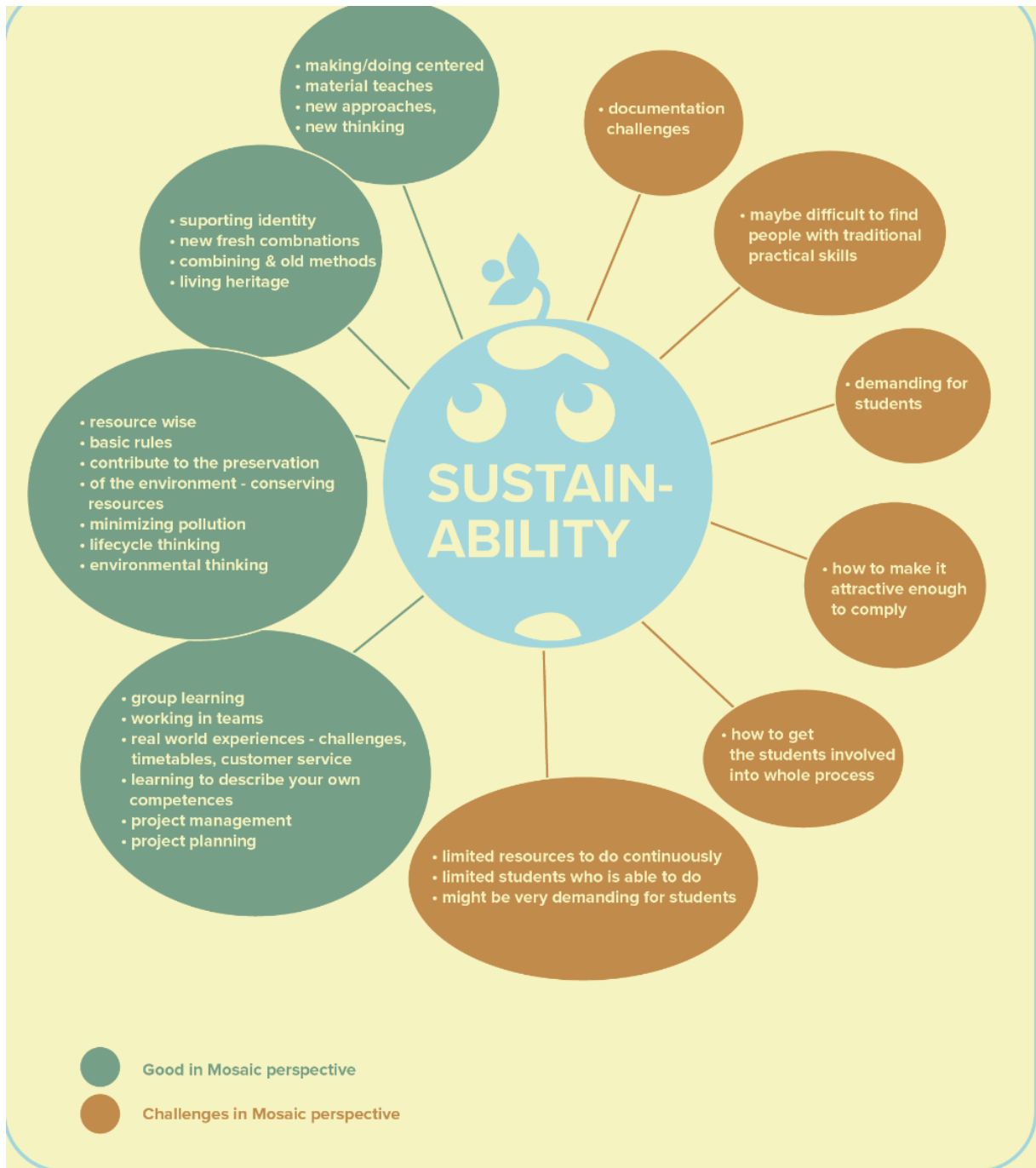


FIGURE 5. Infographic visualising new education models (produced by Paula Nurminen, LAB University, MOSAIC partner).

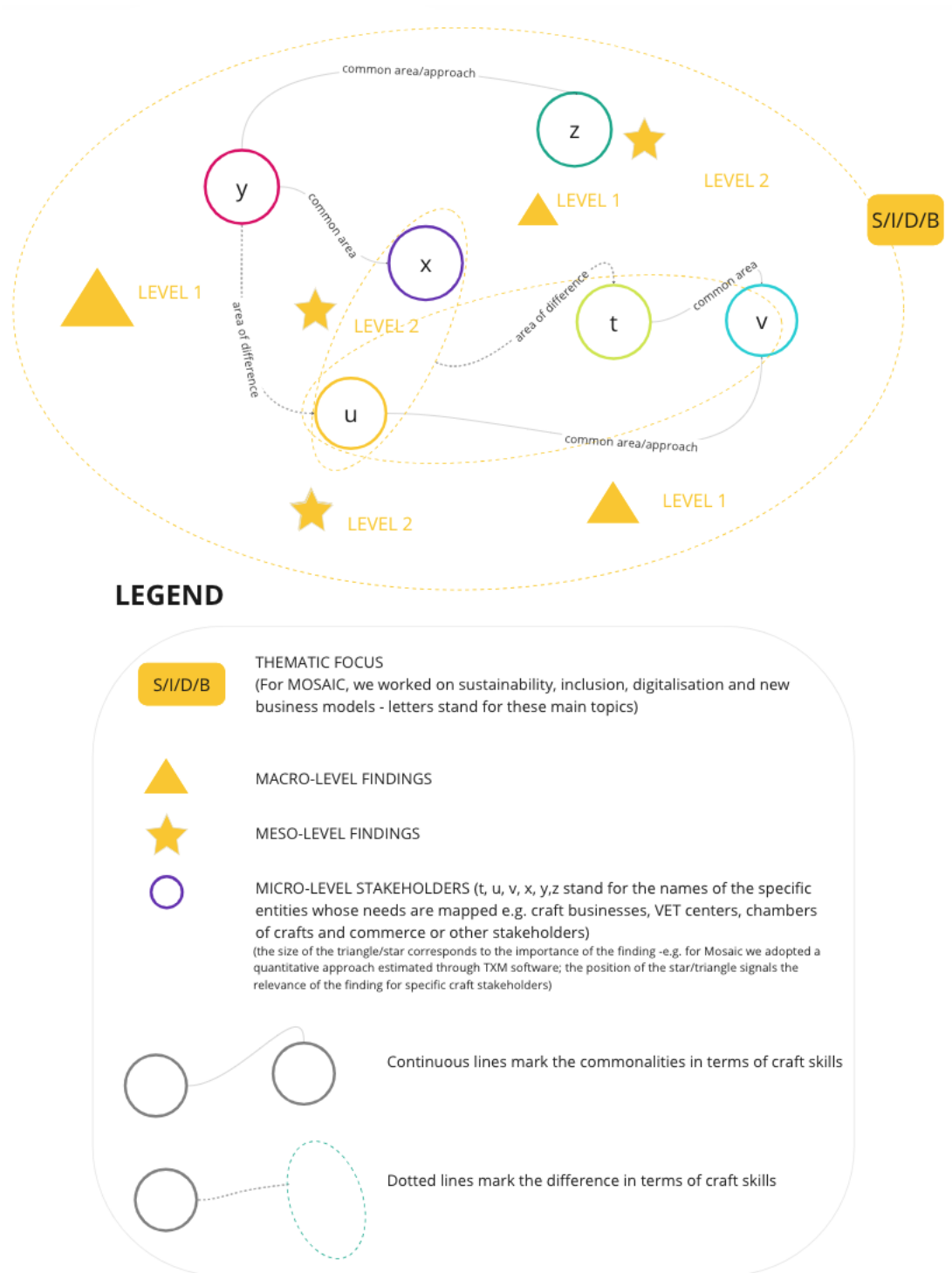


FIGURE 6. Craft skills cartography.

The three-dimensional analysis led to the formulation of an integrated framework for mapping craft skills. To visualise the findings resulting from the implementation of the framework, we developed a cartographic method and a corresponding coding system that can be adapted to the needs of projects dealing with the mapping of craft skills (Figure 6). Cartography is a suitable approach, as it fosters a useful representation and understanding of craft skill needs by selecting relevant aspects and laying these aspects and their mutual relationships out in a two-dimensional space (Providencia, 2015). Thematic areas are represented through dotted spheres; these can intersect, signalling a shared use of concepts

among themes. Smaller dotted spheres inside bigger ones represent smaller ecosystems with specific implications for skills. Inside spheres, we have three types of representations of findings:

- Macro level: *triangles* marking core findings on the legal and research context
- Meso level: *stars* signalling unique aspects brought by education models
- Micro level: *circles* representing single entities' needs (VET centres, businesses, chambers of crafts, etc.)

The different levels are connected through arrows, representing either commonalities (continuous lines) or differences (dotted lines) in terms of approaches to skills. This type of visualisation is different from standard graphs such as networks or scatterplots (Healy, 2018), as it works on multiple levels of data representation and constitutes customisable depictions of findings, with implications for further research design as well as policy planning.

CONCLUSION

In this methodological article, we explored the potential of using cultural mapping as an approach for a holistic investigation of craft skill needs across multiple countries through a systematic and participatory process. This has facilitated the identification of relevant stakeholders in the mapping process, the gathering of existing data using mapping techniques that suited the context and objectives of MOSAIC, the documentation of traditional knowledge associated with craft skills, and the analysis of collected data using non-traditional tools. More concretely, we have discussed the design of a responsive, multi-dimensional, and transversal research ecosystem for mapping craft skills by applying cultural mapping. Responsiveness was imperative, as it enabled us to constantly update the methods for collecting and analysing data and adapt to the emerging needs of the project and of working with non-research participants. The overall research framework, rooted in changing social practices, facilitated this process by enabling a conceptualisation of craft skills as being fluid and in close dialogue with and sensitive to their context. Multi-dimensionality instead refers to the variety of perspectives brought by participatory approaches. We collected data representing the views of VET centres, chambers of crafts/commerce, NGOs, teachers, and businesses. Transversality refers to the combination of conventional and non-conventional analytical approaches. This made it possible to find a thread linking the different perspectives on skills and to provide a comprehensive representation thereof. In doing so, we have proposed a possible integrative framework for mapping skills needs that combines the advantages of three different approaches (macro, meso, and micro) and takes advantage of their complementary nature.

As a work in progress, this study provides a suitable example of a context-driven research strategy that reaches beyond the borders of disciplines. As such, it fosters a holistic approach to craft science that speaks to craft researchers, educators, and policymakers and has important implications for development. For researchers, the framework represents a useful guide for mapping skill needs in a holistic manner. For educators, it sheds light on some of the latest education trends and the aspects that need consideration in craft skill training. For policymakers, it provides a useful guide about the state of the art of craft education and ways in which funding streams and policies need to evolve to meet the complex needs of craft education. What emerges is the need for a multi-dimensional dialogue between specific research methods, levels of analysis, and views of skills that matches the increasing complexities of conducting research into craft science. Such dialogues can give rise to versatile and responsive research strategies that make space for new ways of collecting and analysing data. Finding novel pathways in craft research is ultimately a proof of invention and adaptation. And adaptation (Kerlaff, 2023), as the ability to meet the needs of a constantly evolving society, will be the predominant requirement of the future.

ACKNOWLEDGEMENTS

This research was conducted with the help of the European Union through Erasmus+ funding. A special thank-you goes to Claire Challande, MOSAIC project coordinator at SEPR; our team at UJM: Marie Schill, Marc Frechet, Cecile Redondo, Alexandra Leyrit, Pauline Kuntz, Eva Perez, and Philippe Landrivot; and our research partners at LAB University, Veli-Pekka Raty, Katariina Maenpaa, Outi Peippo, and Paula Nurminen.

REFERENCES

- Alkhalawi, J. S. (2022). Studying the establishment of crafts and arts incubator. *Journal of Positive School Psychology*, 6(11), 361-390.
- Augsten, A., & Gekeler, M. (2017). From a master of crafts to a facilitator of innovation. How the increasing importance of creative collaboration requires new ways of teaching design. *The Design Journal*, 20(sup1), S1058-S1071. <https://doi.org/10.1080/14606925.2017.1353049>
- Balaid, A., Abd Rozan, M. Z., Hikmi, S. N., & Memon, J. (2016). Knowledge maps: A systematic literature review and directions for future research. *International journal of information management*, 36(3), 451-475. <https://doi.org/10.1016/j.ijinfomgt.2016.02.005>
- Blair, E. (2015). A reflexive exploration of two qualitative data coding techniques. *Journal of Methods and Measurement in the Social Sciences*, 6(1), 14-29. <https://doi.org/10.2458/v6i1.18772>
- Bourdieu P. (2000 [1972]), *Esquisse d'une théorie de la pratique: Précédé de trois études d'ethnologie Kabyle* [Outline of a theory of practice: Proceeding by three ethnological studies]. Librairie Droz. <https://doi.org/10.3917/droz.bourd.1972.01>
- Cabeça, S. M. (2018). Cultural mapping: A sustainable methodology for intangible cultural heritage. *Memoriamedia Review*, 3, 1-9.
- Comunian, R., & Alexiou, K. (2015). Mapping the complexity of creative practice: using cognitive maps to follow creative ideas and collaborations. In N. Duxbury, W.F. Garrett-Petts, & D. MacLennan (Eds.), *Cultural mapping as cultural inquiry* (pp. 276-302). Routledge. <https://doi.org/10.4324/9781315743066-14>
- Curtin, B. (2009). Semiotics and visual representation. *Semantic Scholar*, 51-62.
- Duxbury, N., Garrett-Petts, W. F., & MacLennan, D. (2015). Cultural mapping as cultural inquiry: introduction to an emerging field of practice. In N. Duxbury, W. F. Garrett-Petts, & D. MacLennan (Eds.), *Cultural mapping as cultural inquiry* (pp. 142). Routledge. <https://doi.org/10.4324/9781315743066>
- Edwards, C. P. & Gandini, L. (2015). Teacher research in Reggio Emilia, Italy: Essence of a dynamic, evolving role. *Voices of Practitioners: Teacher Research in Early Childhood Education*, Winter, 10(1). http://digitalcommons.unl.edu/famconfacpub/105?utm_source=digitalcommons.unl.edu%2Ffamconfacpub%2F105&utm_medium=PDF&utm_campaign=PDFCoverPages
- Feldman, M. S., & Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization science*, 22(5), 1240-1253. <https://doi.org/10.1287/orsc.1100.0612>
- Freitas, R. (2016). Cultural mapping as a development tool. *City, Culture and Society*, 7(1), 9-16. <https://doi.org/10.1016/j.ccs.2015.10.002>
- Gelman, A. (2008). Variance, analysis of. In *The New Palgrave Dictionary of Economics* (pp. 1-7). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-349-95121-5_2402-1
- Härkki, T., Seitamaa-Hakkarainen, P., Vartiainen, H., Saarinen, A., & Hakkarainen, K. (2023). Non-linear maker pedagogy: Implementing a major curriculum change in crafts education. *Techne Series: Research in Sloyd Education and Craft Science A*, 30(1), 1-17. <https://doi.org/10.7577/TechneA.4998>
- Healy, K. (2018). *Data visualization: a practical introduction*. Princeton University Press.
- Ingold, T. (2001). Beyond art and technology: the anthropology of skill. In M. B. Schiffer (Ed.), *Anthropological perspectives on technology* (pp. 17-31). University of New Mexico Press.
- Jeannotte, M. S. (2016). Story-telling about place: Engaging citizens in cultural mapping. *City, Culture and Society*, 7(1), 35-41. <https://doi.org/10.1016/j.ccs.2015.07.004>
- Jordan, D. (2018). Contemporary methodological approaches to qualitative research: A review of the oxford handbook of qualitative methods. *The Qualitative Report*, 23(3), 547-556. <https://doi.org/10.46743/2160-3715/2018.3448>
- Kerlaff, P. (2023). In a new Context, we are all Apprentices: How Dialogue Between the Three States of Craft Education is a Catalyst for Adaptation. In A. Lazet (Ed.), *Design for Adaptation: Cumulus Conference Proceedings Detroit 2022* (pp.438-449). Cumulus.

- Kvellestad, R. V., & Vatn, G. (2022). The three-headed lecturer: Perspectives on the lecturer's role in co-activity in design, art, and craft education. *Techne serien-Forskning i slöjdpedagogik och slöjdvetenskap*, 29(2), 58-74. <https://doi.org/10.7577/TechneA.4378>
- Laurell, J., Seitamaa, A., Sormunen, K., Seitamaa-Hakkarainen, P., Korhonen, T., & Hakkarainen, K. (2021). A socio-cultural approach to growth-mindset pedagogy: Maker-pedagogy as a tool for developing the next-generation growth mindset. In E. Kuusisto, M. Ubani, P. Nokelainen, & A. Toom (Eds.) *Good Teachers for Tomorrow's Schools* (pp. 296-312). Brill. https://doi.org/10.1163/9789004465008_016
- Lillard, A. S., Lerner, M. D., Hopkins, E. J., Dore, R. A., Smith, E. D., & Palmquist, C. M. (2013). The impact of pretend play on children's development: a review of the evidence. *Psychological bulletin*, 139(1), 1. <https://doi.org/10.1037/a0029321>
- Logan, T. (2020). A practical, iterative framework for secondary data analysis in educational research. *The Australian educational researcher*, 47(1), 129-148. <https://doi.org/10.1007/s13384-019-00329-z>
- Martinez, S. L., & Stager, G. (2013). *Invent to learn. Making, tinkering, and engineering in the classroom*. Constructing Modern Knowledge Press.
- Nesterov, A. Y. (2021). Semiotics as methodology and ontology. *Семиотические исследования*, 1(1), 6-13. <https://doi.org/10.18287/2782-2966-2021-1-1-6-13>
- Okoko, J. M. (2023). *Action Research*. In J. M. Okoko, S. Tunison, & K.D. Walker (Eds.) *Varieties of Qualitative Research Methods: Selected Contextual Perspectives* (pp. 9-13). Springer International Publishing. https://doi.org/10.1007/978-3-031-04394-9_2
- Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of educational Psychology*, 101(1), 115. <https://doi.org/10.1037/a0013383>
- Pillai, J. (2022). *Cultural Mapping: A Guide to Understanding Place, Community and Continuity*. Strategic Information and Research Development Centre.
- Philip, S. (2020). Cultural Mapping and the Making of Heritage. In S. P. Gabriel (Ed.), *Making Heritage in Malaysia: Sites, Histories, Identities* (pp. 139-162). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-1494-4_5
- Providência, P. (2015). City readings and urban mappings: The city as didactic instrument. In N. Duxbury, W.F. Garrett-Petts, & D. MacLennan (Eds.) *Cultural mapping as cultural inquiry* (pp. 217-230). Routledge. <https://doi.org/10.4324/9781315743066-11>
- Schatzki, T. (2001). Introduction: practice theory. In T. Schatzki, K. Knorr Cetina and E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1-14). Routledge. [https://doi.org/10.1016/S0956-5221\(03\)00029-0](https://doi.org/10.1016/S0956-5221(03)00029-0)
- Shove, E., & Pantzar, M. (2005). Consumers, producers and practices: Understanding the invention and reinvention of Nordic walking. *Journal of consumer culture*, 5(1), 43-64. <https://doi.org/10.1177/1469540505049846>
- Sheridan, K., Halverson, E. R., Litts, B., Brahms, L., Jacobs-Priebe, L., & Owens, T. (2014). Learning in the making: A comparative case study of three makerspaces. *Harvard Educational Review*, 84(4), 505-531. <https://doi.org/10.17763/haer.84.4.brr34733723j648u>
- Scholz, R. (2019). Lexicometry: A Quantifying Heuristic for Social Scientists in Discourse Studies. In R. Scholz (Ed.), *Quantifying Approaches to Discourse for Social Scientists* (pp. 123-153). Springer International Publishing. https://doi.org/10.1007/978-3-319-97370-8_5
- Stewart, S. (2007). *Cultural mapping toolkit*. Creative City Network of Canada and 2010 Legacies Now. Strategies for Tourism Industry – Micro and Macro Perspectives 232. https://www.saskculture.ca/content/grant_application_files/cultural_mapping_toolkit.pdf
- Suchan, T. A., & Brewer, C. A. (2000). Qualitative methods for research on mapmaking and map use. *The Professional Geographer*, 52(1), 145-154. <https://doi.org/10.1111/0033-0124.00212>
- Warde, A. (2005). Consumption and theories of practice. *Journal of consumer culture*, 5(2), 131-153.

<https://doi.org/10.1177/1469540505053090>.

Wenger, E. (2004). Knowledge management as a doughnut: Shaping your knowledge strategy through communities of practice. *Ivey business journal*, 68(3), 1-8. https://doi.org/61.8574/9818941901_57399

Wutich, A., & Brewis, A. (2019). Data collection in cross-cultural ethnographic research. *Field Methods*, 31(2), 181-189. <https://doi.org/10.1177/1525822X19837>

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in quantitative methods for psychology*, 9(2), 79-94. <https://doi.org/10.20982/tqmp.09.2.p079>