ASSESSING THE IMPACTS OF PRACTICE-LED AND PRACTICE-BASED RESEARCHES FOR EFFECTIVE INTEGRATION AMONG CREATIVE DESIGN SCHOLARS

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Introduction

The field of research has witnessed a remarkable shift in recent years, with an increasing emphasis on practice-led and practice-based research (Biljon, 2016). This model recognizes the research methods as feasible, quantifiable and verifiable. The evolving landscape of academia has highlighted the need for research that not only contributes to the existing knowledge base, but also engages with real-world challenges, leading to effective and sustainable solutions (Smith, 2010). It is an approach where practice itself is the primary mode of inquiry, generating new knowledge, insights, and methodologies (Schuler & Namioka, (1993). Practice-based research, on the other hand, involves the systematic study of practice, aiming to develop a deeper understanding of a specific domain and informing future practice (Zimmerman, Forlizzi, & Evenson, 2007). They maintained that the integration of practice-led and practice-based research holds immense potential to bridge the gap between academia and professional practice. Zimmerman et al. (2007) argue that this integration facilitates the exchange of ideas, experiences, and expertise, enriching both realms and fostering a dynamic and collaborative research environment. They concluded that scholars engaged in practice-led and practice-based research are uniquely positioned to explore complex problems, test innovative solutions, and generate practical outcomes that have a direct impact on their respective fields.

Practice-led research is an approach to research that places emphasis on creative and artistic practice as a means of generating new knowledge and understanding. (Smith, 2010). Smith asserts that it involves practitioners engaging intuitive and creative activities and reflecting on their experiences to generate insights and contribute to the broader field of study. Schuler & Namioka, (1993) posit that, there is a moment in the creation process; when a new insight, an understanding of how to achieve the desired end, a satisfying arrangement of elements, is gained: if remembered and recorded, that moment of knowing begins the process to becoming collective knowledge. That study suggests that new knowledge found through exploration is embedded in the creative practice and that information about this knowledge can be found in the people creating it, the materials used, the processes involved and the designs produced; but cannot be found in only one of these alone. Schuler & Namioka emphasize also that paying attention to these aspects of the practice and context can lead to insight and further understanding.

According to Frascara (2002), research can be seen as a form of exploration, in which designers engage in a process of discovery through the creation of new artifacts or knowledge. Practice-led research methods allow designers to explore new ideas and concepts through the process of design, and to generate new insights and understandings that can inform their practice. Practice-based research refers to a form of research that centers on the exploration and investigation of professional practices, often within disciplines such as education, healthcare, social work, and organizational management (Billett, 2011). Billett emphasizes the need for scholars to engage with the practice contexts of their students and create opportunities for active inquiry and learning. Practice-based

research aims to generate knowledge that is informed by, and directly applicable to, real-world professional contexts. This approach involves practitioners actively participating in the research process, reflecting on their experiences, and using their insights to inform theory, policy, and practice (Schön, 1983). Both of these approaches share a common goal of using design practice as a means of generating new knowledge and insights, and are particularly suited to the field of design, where creative exploration and experimentation are central to the design process, like architecture, engineering and creative arts. The major difference is the intuitive and formal processes involved in the research methods. These methods are becoming increasingly popular in design research as they allow for a more iterative and reflective approach to research, and can result in more innovative and impactful outcomes (Obafemi, 2014).

Design research refers to a systematic and iterative process of investigation and inquiry that aims to generate new knowledge, insights, and understanding in the field of design. It involves applying research methods and principles to explore design problems, develop innovative solutions, and inform the practice of design (Cross, 2001). The author further emphasizes the importance of research in design practice and explores the distinctive characteristics and challenges of conducting research in the design field. Design research seeks to understand the ways in which design can contribute to society and improve people's lives. One of the key challenges for designers and researchers is to develop new methods and approaches that can help to bridge the gap between theory and practice (Koskinen, Zimmerman, *et al*, 2011). Design research is an interdisciplinary field that draws on methods and techniques from a variety of fields, including design, engineering, psychology, and anthropology. It is evident that intuitiveness would not suffice in researches that are not practical in nature.

One key aspect of design research is the use of repetitive design processes, in which designers create prototypes of products or services and then test them with users in order to gather feedback and refine the design (Barrett, 2007). This approach allows designers to quickly identify and address usability problems, and to make sure that the final product or service meets the needs of its intended users. Both practice-led and practice-based research methods have gained prominence as means of conducting research through the practice of design and of informing research through the practices of design (Koskinen et al, 2011). These methods offer a more iterative and reflective approach to research, and can result in more innovative and impactful outcomes (Cross, 2006). This study aims to evaluate and adopt the individual strengths of both practice-led and practice-based research methods in four key areas;

i. Learning and skill development
ii. Collaborative practices
iii. Enhancing of creativity and
iv. Application of knowledge gained

The resulting excerpts will result to an improved approach to research design.

Literature Review

In reviewing the existing research methods, it appears that while practice-led and practice-based research methods offer many benefits, they also present a number of challenges for designers and researchers. One of the main challenges of the practice-led is the lack of a clear methodology for conducting research through practicality in design (Lawson, 2006)). Lawson noted that designers often rely on intuition and tacit knowledge to guide their work, which can make it difficult to articulate a clear research methodology. The author listed another challenge as the difficulty of measuring the impact of practice-led research method. According to Oxman (2004), traditional research methods are often based on quantitative measures of success, such as the number of publications or citations. However, practice-led research method may not produce such tangible output, which can make it difficult to assess their impact. Practice-led research often focuses on

specific creative practices and process, which may limit the generalizability of the findings to other contexts or disciplines (Haseman, & Mafe, 2018). The authors opined that this usually hinders the intuitive researcher from recognition, and this appears unproductive. They emphasized that practice-led research involves subjective interpretation and analysis of creative processes and outcomes and that this subjectivity can make it challenging to establish consensus in processes, results or replicate findings. The paper asserts that practice-led research emphasizes the exploration of processes and outcomes, sometimes lacking a strong theoretical foundation. This can make it challenging to situate the research within broader intellectual frameworks. Borgdorff, (2012) declared that assessing the quality and impact of artistic outputs can be subjective and challenging, making it difficult to establish rigorous evaluation criteria. For instance, a graphic designer conducts a practice-led research project exploring a new computer painting technique. While the research produces interesting and innovative artwork, it may be challenging to translate the findings into broader principles or theories applicable to other designers or disciplines. According to Gray & Malins (2004), due to the diverse nature of artistic practices, there is often a lack of standardized methodologies or frameworks for practice-led research. This can make it difficult to associate with or build upon an existing research method. The authors stressed that communicating practice-led research outcomes to wider audiences, especially those outside the creative community, can be challenging. Similarly, traditional research dissemination channels may not effectively capture the experiential or embodied aspects of inventive practice. As stated by Sullivan, 2010 practice-led research often requires alternative forms of assessment and validation compared to traditional research methods. This can present challenges when seeking recognition or evaluation within academic institutions or funding agencies that may prioritize more conventional research outputs. Haseman, (2006) asserts that the diversity of creative practices and perspectives can lead to a lack of consensus or agreement within the field regarding the value, rigor, or methodologies of practice-led research. This can make it challenging to establish a unified approach or set of standards.

On the other hand, practice-based research often takes place within real-world settings, where various external factors can influence the outcomes (Smith & Dean, 2009). This lack of control over variables makes it challenging to establish causality or isolate specific factors that contribute to the results. Secondly, practice-based research may require extensive time and resources to implement, as it involves actively engaging with practitioners and conducting fieldwork or observation (Gray & Malins, 2013). Furthermore, finding suitable methods and tools for documenting and representing the nuances of practice-based research can have impact on the integrity and comprehensibility of the research outcomes (Smith & Dean, 2009). For instance, a researcher investigates the effectiveness of a new teaching method in a lecture-room setting. While the research provides valuable insights into the practical application of the teaching method, external factors such as student motivation or administrative changes in the school may muddle the results. Similarly, capturing and documenting the ephemeral or experiential aspects of creative practice can be challenging.

Despite these challenges, there is growing interest in the integration of practice-led and practice-based research methods in design education and practice Koskinen et al. (2011). The authors argue that these methods can help to bridge the gap between theory and practice in design, and can provide a more meaningful and engaging learning experience for scholars. The study suggested that one approach to integrating practice-led and practice-based research methods in design practice and education is through the use of design studios. Design studios provide a space for students to engage in a process of exploration and experimentation, and to collaborate with others to develop and refine their work (Frascara, 2002). By incorporating practice-led and practice-based research methods into design studios, scholars can help students to develop a deeper understanding of the role of design in society, and to develop more innovative and impactful approaches to their work.

Methodology

To achieve the objectives of this research, a quantitative survey approach was employed. The data collection was by administering a structured survey questionnaire to a range of professionals in the academia. This approach allowed for a comprehensive understanding of the impact of practice-led and practice-based researches for effective integration among scholars. The survey questionnaire was designed to capture demographic information, learning and skill development, collaborative practice, creativity, relevance and applicability of knowledge gained as they relate to the research methods in professional practices. Likert-scale were utilized to measure the above variables. Thematic analysis was employed to identify key themes and patterns in the qualitative data received from participants' responses, which revealed the following key themes:

SN	Thematic Area	% Score
1	Enhanced Learning and Skill Development	78
2	Bridging Theory and Practice	83
3	Collaborative and Interdisciplinary Engagement	92
4	Innovation and Creativity	79
`5	Relevance and Applicability	87

Table 1: Participant's responses based on thematic areas

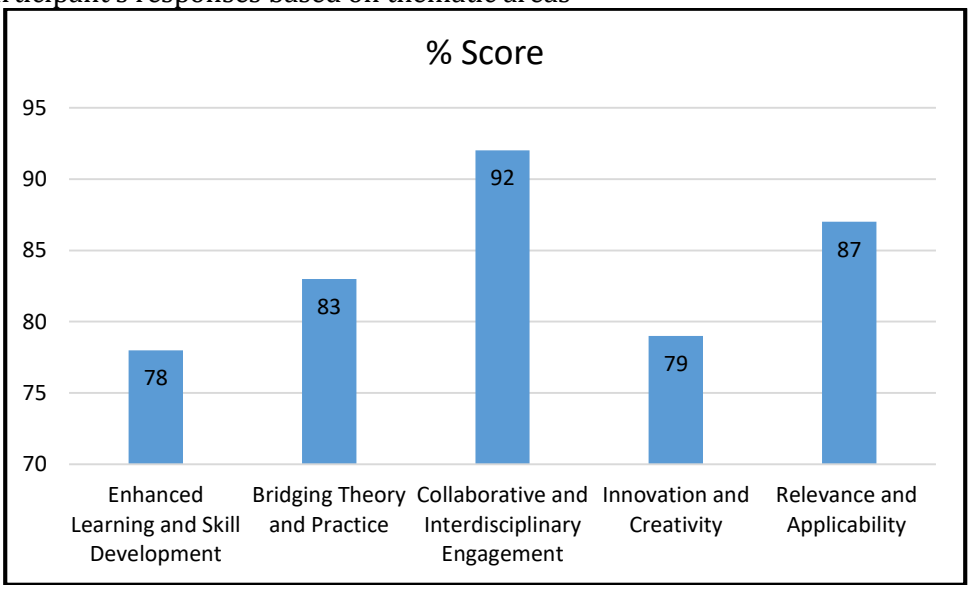

Fig. 1.

Enhanced Learning and Skill Development: 78% of participants emphasized that practice-led and practice-based research methods provided them with valuable hands-on experience, enhancing their learning, practical skills, and critical thinking abilities.

Bridging Theory and Practice: 83% of participants recognized that practice-led and practice-based research methods effectively bridged the gap between theoretical knowledge and real-world application, allowing them to apply and test theoretical concepts, frameworks, and models in practical settings.

Collaborative and Interdisciplinary Engagement: 92% of participants highlighted the collaborative nature of practice-led and practice-based research methods. They expressed that engaging with peers, industry professionals, and experts from various disciplines fostered rich discussions, diverse perspectives, and interdisciplinary collaboration.

Innovation and Creativity: 79% of participants valued the freedom and flexibility provided by practice-led and practice-based research methods, which encouraged experimentation, innovation, and creative problem-solving.

Relevance and Applicability: 87% of participants consistently emphasized the practical relevance and applicability of practice-led and practice-based research methods. They noted that these methods were more meaningful and applicable to real-world contexts, enabling them to address practical challenges and contribute to the advancement of knowledge in their field.

These percentages represent the proportion of participants who mentioned each key theme in their qualitative responses, providing an overview of the prevalent perspectives among the participants.

Findings

Notable gaps in these research methods include the nature of the research contributions, collaboration and interdisciplinary. Practice-led research aims to make broader contributions to the field of study, advancing knowledge, theories, or methodologies. The outcomes may have implications beyond the immediate practice context. Practice-based research, on the other hand, typically focuses on enhancing the practice itself, aiming to improve professional skills, develop innovative approaches, or address specific challenges within the field. Both practice-led and practice-based research can involve collaboration and interdisciplinary. The contributions often have a direct and immediate impact on the practitioner community. However, practice-led research appears to be more inclined to engage with other disciplines and fields of study. It seeks to integrate diverse perspectives and methods to enrich the research inquiry and generate cross-disciplinary insights. Practice-based research, while open to collaboration, often centers on the specific practice domain and may primarily draw on disciplinary expertise within that context. Another benefit of practice-led and practice-based research methods is their ability to foster a culture of experimentation, collaboration, and critical reflection. Design studios provide a space for designers to experiment with new ideas and approaches, and to collaborate with others to develop and refine their work. Through the process of critical reflection, designers can gain a deeper understanding of their own practice, and of the role of design in society.

Discussion on Findings

One of the main benefits of practice-led and practice-based research methods is their ability to generate new knowledge through the process of design. Integrating practice-led and practice-based research methods can lead to a more creative and effective research approach that combines the strengths of both approaches for more effective outcome. Such engagements are in the form of the following:

i. Reoccurring cycles of practice and reflection: Engage in a cyclical process of practice and reflection, where creative practice informs the research process and vice versa. Allowing for feedback loops between the creative practice and research inquiry while constantly refining and developing both aspects. Example: A graphic designer/researcher develops a series of artworks as part of the practice-led research. After creating each artwork, he/she reflects on the process, documenting their observations, insights, and challenges. These reflections then inform the subsequent iterations of their artistic practice, leading to further inquiry and exploration.
ii. Theoretical framing of practice: Situate the creative practice within a theoretical framework, drawing on relevant concepts, theories, or literature. This provides a deeper understanding and context for the practice-led research. Example: A fashion designer engages in practice-led research to explore sustainable materials for fashion. They incorporate theories of sustainability, ecological design, and circular economy principles to guide their material

selection and design process. The research outcomes contribute not only to the artistic practice but also to the theoretical discourse on sustainable fashion.

iii. Dissemination and knowledge exchange: Adopt diverse modes of dissemination to effectively communicate the research findings to both artistic and academic communities. Utilize visual documentation, exhibitions, performances, publications, and conferences to share the outcomes of the research. Example: An artist-researcher conducts a practice-based research project exploring the relationship between sound and sculpture. He creates a multimedia installation that combines sculptural forms with sound compositions and the installation is exhibited in galleries, accompanied by artist talks, performances, and a research publication that documents the artistic process and theoretical underpinnings.

iv. Reflexivity and self-awareness: Emphasize reflexivity throughout the research process. Encourage researchers to critically reflect on their own biases, assumptions, and subjectivities that may influence both their practice and research outcomes. Example: A theater director-researcher investigating immersive performance techniques maintains a reflective journal, documenting their own subjective experiences, biases, and moments of self-awareness during rehearsals and performances. This reflexivity enriches the research insights and enhances the transparency of the research process.

v. Mixed-methods approach: Combine qualitative and quantitative methods to gain a comprehensive understanding of the research topic. Supplement artistic practice and qualitative observations with quantitative data collection and analysis when applicable. Example: A researcher exploring the impact of art therapy on mental health combines qualitative interviews with participants and observations of their artistic processes with pre- and post-intervention standardized psychological assessments to measure changes in well-being.

Conclusion

Practice-led and practice-based research methods can emerge as valuable approaches that bridge the gap between theory and practice, fostering effective integration among scholars. Through the integration of creative exploration and empirical investigation, these research methods can demonstrate their potential to generate new knowledge, drive innovation, and address real-world challenges across various disciplines.

The examples presented in this article highlighted the possible successful integration of practice-led and practice-based research methods in different domains, such as architecture, healthcare, and graphic design. In these fields, practitioners and researchers have leveraged practice-led approaches to explore new ideas, experiment with innovative solutions, and generate practical outcomes.

Furthermore, the integration of practice-led and practice-based research methods can foster collaboration and interdisciplinary exchange. This collaborative environment has enriched research outcomes, stimulated creativity, and ensured the relevance and applicability of findings in real-world contexts.

Moreover, practice-led and practice-based research methods can cultivate critical thinking skills among scholars. By engaging in reflective and iterative processes, researchers can be able to challenge existing theories, question assumptions, and develop innovative approaches to complex problems. This approach promotes a deeper understanding of the subject matter and encourages continuous learning and improvement.

Institutions, funding agencies, and researchers themselves should continue to support and invest in these approaches. Ongoing collaboration and knowledge exchange between academia and professional practice are crucial to harnessing the full potential of practice-led and practice-based research methods.

In conclusion, practice-led and practice-based research methods offer a promising pathway for effective integration among scholars, promoting creativity, collaboration, critical thinking, and knowledge advancement. By embracing these approaches, researchers can make significant contributions to their respective fields, address complex challenges, and shape a better future through the meaningful integration of theory and practice.

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