Lyall, C., & Fletcher, I. (2013). Experiments in interdisciplinary capacity-building: The successes and challenges of large-scale interdisciplinary investments. *Science and Public Policy*, *40*(1), 1-7.

The article by Lyall and Fletcher (2013) in "Science and Public Policy" explores the complexities and challenges of large-scale interdisciplinary research investments. It emphasizes the growing importance of interdisciplinary research (IDR) in addressing complex, multidimensional, policy-related problems, particularly in the context of global challenges. This article offers significant insights into the operational dynamics of IDR, which is relevant to our interest in understanding and effectively managing such research endeavors.

The authors note that interdisciplinary research is increasingly essential for innovative solutions to complex problems. However, they highlight the conflict between the interdisciplinary approach and the traditional discipline-based academic conventions, structures, and norms. This tension is crucial for us to understand, as it underpins many of the challenges faced in IDR.

In Britain and internationally, research funding bodies like the Research Councils UK (RCUK) and others emphasize the need for IDR, especially for tackling 'grand challenges'. This international trend towards IDR, involving collaboration across disciplines and borders, is aimed at fostering scientific and technological advancement and its beneficial utilization in society.

The article stresses that IDR does not happen automatically but requires a concerted effort to achieve synergy and cohesive team-building across specialisms. The authors emphasize the importance of understanding the relationship between interdisciplinarity and disciplines, noting that while disciplines offer communication efficiency within their fields, they can limit research horizons.

The authors discuss the evolution of IDR, suggesting a move beyond the 'Mode 2' model to a 'third wave' where knowledge production involves not just academic cross-disciplinary collaboration but also integration into society. This is exemplified by programs like the UK's RELU and the ESRC Genomics Network.

The authors argue for a balance between the 'scholarship of discovery' and the 'scholarship of integration' and application. They recognize the transformative impact of IDR on natural and social sciences but also acknowledge the challenges in forging cross-disciplinary synergies.

The article highlights the need for effective research leadership to develop and nurture interdisciplinary research capacity. It discusses the importance of managing complexity and the skill of setting constructive boundaries around research areas.

The authors describe the importance of long-term investment in IDR to allow for the development of relationships, trust, and overcoming collaborative obstacles. They emphasize the need for research leaders to balance multiple goals and engage with various stakeholders.

The article discusses the importance of defining and creating the identity of interdisciplinary research units, negotiating multiple identities and roles, and establishing a common purpose. It also highlights the need for institutional support and governance structures that accommodate IDR.

Overall, the Lyall and Fletcher's article provides a comprehensive analysis of the successes and challenges associated with large-scale interdisciplinary research investments. It offers valuable insights into the complexities of integrating different disciplines, the importance of effective management and leadership, and the need for institutional support and flexibility to facilitate successful IDR. These findings are particularly relevant to our work in understanding how to effectively manage and sustain interdisciplinary research endeavors within academic and policy-related contexts.