al., 2020), b) x5: Location to implement by (Zhao & Wang, 2020), c) x6: Hybrid System by (Diniardi et al., 2017; Sivasubramanian et al., 2021)

Table 1. Relevant Study

No	Author (year)	Research Result	Similarities with this article	Differences with this article
1.	Sekhar et al. (2023)	Reviewing Energy Sources (x1), Materials (x2) and Piezoelectric Applications (x3).	Energy sources (x1), materials (x2), and design (x3) influence Piezoelectric Energy Harvesting (PEH).	Our article reviews literature related to Energy Resources, Materials, and Design, focusing on the airport.
2.	Shaukat et al. (2023)	Energy sources (x1), materials (x2), and design (x3) have a positive and significant influence on Piezoelectric Energy Harvesting (PEH). This article focuses on the development of PEH technology in general.	Energy Resources and design impact Piezoelectric Energy Harvesting (PEH) and show the potential of PEH applications in various fields, such as energy use for sensor networks, wearable electronics, and IoT components.	Application Piezoelectric Energy Harvesting at Airports: Energy Resources, Materials and Design" is more specific and focused on airport applications.
3.	Arimurti et al. (2020)	Energy sources (x1), materials (x2), and test stages (x4) have a positive and significant impact on Piezoelectric Energy Harvesting. This study discussed the material type polycrystalline ceramic and the piezo vibration sensor of PVDF material (polyvinylidene fluoride).	Energy Sources & Materials Influencing Piezoelectric Energy Harvesting.	The research deals only with one source of energy: footsteps and the type of ceramic material alone. In this study, the author reviews the literature on energy sources, materials, and airport design in general.
4.	Yulia et al. (2016)	Energy sources (x1) and design (x3) transducer systems positively and significantly influence Piezoelectric Energy Harvesting. Piezoelectric sleep police received input from motor vehicle pressure with a cantilever system for the system.	Energy sources from vehicle traffic on the sleeping police and design influence the Piezoelectric Energy Harvesting.	(Yulia et al., 2016) only discusses the energy sources of vehicle traffic and the design of transducer systems influencing Piezoelectric Energy Harvesting and does not discuss the selected material.
5.	Zhao & Wang (2020)	Energy sources (x1) and implementation location (x5), testing techniques have a positive and significant impact on Piezoelectric Energy Harvesting. This research suggests that designs can affect power output and the horizontal location of energy harvesters.	Energy sources of building structures influence Piezoelectric Energy Harvesting.	The power source is the load and speed of the aircraft, with the installation location on the Pavement System on the runway only, not on the airport generally.
6.	Kováciková et al. (2023)	The size of the energy source (x1) and the design of the structure (x3), have a positive influence on Piezoelectric Energy Harvesting. The research uses sources at the airport that include aircraft noise near airports, vibrations from jet and supersonic aircraft, aircraft engine tests, airplane runway noise, and supersonic noise.	The energy source of the flight operations can be used as a piezoelectric source.	The power source raised is only vibration from the airside of the airport, with installation locations on the Pavement System on the runway, not at the airports generally.
7.	(Sivasubramanian et al., 2021)	Material (x1), Design (x3), hybrid photovoltaic technology (x6)have a positive and significant influence on Piezoelectric Energy Harvesting.	Materials and design influence Piezoelectric Energy Harvesting.	Hybrid photovoltaic technology influences Piezoelectric Energy Harvesting .
8.	(Diniardi et al., 2017)	Material (x1), Design (x2), hybrid photovoltaic technology (x6) have a positive and significant influence on Piezoelectric Energy Harvesting.	Materials and design influence Piezoelectric Energy Harvesting.	Hybrid photovoltaic technology influences Piezoelectric Energy Harvesting.

CONCLUSION

By considering the theory, relevant publications, and debates, it is feasible to develop hypotheses for future research. One such hypothesis is that energy sources impact Piezoelectric Energy Harvesting in airports. 2) At airports, Materials impact the process of converting mechanical energy into electrical energy, known as piezoelectric energy harvesting. 3) Designs impact the Piezoelectric Energy Harvesting system at airports. Implementing piezoelectric energy harvesting technology at airports has the potential to be an innovative solution that promotes sustainability and enhances energy efficiency. Piezoelectric materials can convert mechanical energy into electrical energy by harnessing vibrations and pressure generated by activities at the airport, such as passenger movement, airplane operations, and car traffic. Using piezoelectric energy harvesting technology, airports can decrease reliance on traditional energy sources and minimize carbon emissions. This represents a significant advancement in incorporating environmentally friendly technologies into contemporary infrastructure, enhancing airports' sustainability and efficiency

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SURAT PERNYATAAN TANGGUNG JAWAB BELANJA

Yang bertanda tangan di bawah ini:

1. Nama : Direstu Amalia
2. Alamat : Jalan May. Zen Komplek PT. Pusri
   Jalan Bayam no 8

Berdasarkan Surat Keputusan Direktur Nomor 148 tanggal dan Perjanjian Kontrak Nomor LT.106/1/6/Poltekbang.plg-2024 tanggal 27 Maret 2024 mendapatkan anggaran penelitian dengan judul Potensi Penerapan Nanogenerator Untuk Meningkatkan Kemandirian Energi di Bandar Udara: Optimalisasi Sumber Alternatif Energi Hijau sebesar Rp. 23.345.000,- (dua puluh tiga juta tiga ratus empat puluh lima ribu rupiah).

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2.	Bahan Habis Pakai & Laporan	Rp. 630.000,-
3.	Bahan Pengujian	Rp. 12.035.000,-
4.	Biaya lain-lain	Rp. 3.400.000,-
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Demikian surat pernyataan ini dibuat dengan sebenarnya.

Mengetahui,
Ketua Pusat PPM

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Politeknik Penerbangan Palembang

Berdasarkan hasil telaah tim Jurnal INTECOMS: Journal of Information Technology and Computer Science , artikel yang berjudul "**PENERAPAN PIEZOELECTRIC ENERGY HARVESTING DI BANDAR UDARA: SUMBER ENERGI, MATERIAL DAN DESAIN**" telah **DITERIMA** dan akan di Publikasikan pada jurnal INTECOMS (Terakreditasi SINTA 4) Volume 7 No 5 Tahun 2024.

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Journal Manager

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