

# **PATTERNS OF INTEGRATED GEOSPATIAL TECHNOLOGY UTILIZATION ON SMARTPHONES AND ITS IMPLICATIONS ON GEOSPATIAL LITERACY OF GEN Z (A COMPARATIVE STUDY OF RURAL, PERI-URBAN, AND URBAN AREAS OF NORTHERN YOGYAKARTA CITY)**

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## **ABSTRACT**

Geospatial technology has been integrated into devices used massively by society, especially by Gen Z. The problem is that this technology has not been used to optimally develop geospatial literacy. This research aims to reveal the pattern of use of integrated geospatial technology in devices by Gen Z, especially in activities on social media and marketplaces, to analyze the implications of the use of integrated geospatial technology in devices on Gen Z activities in social media applications and market places on geospatial literacy. The research was conducted using a survey design. The research population was high school (SMA) students in urban areas in the northern part of Yogyakarta City, peri-urban areas, and rural areas of Sleman Regency bordering the northern of peri-urban area. Sampling was carried out proportionally randomly from each region. The variables studied in this research are patterns of geospatial technology use, ability to use geospatial technology, and spatial behavior. Data collection was carry out using an online questionnaire. Data analysis used descriptive statistics and ANOVA. The research results show that the pattern of use of integrated geospatial technology in gadgets by Gen Z, especially in activities on social media, is shown by the time spent using social media applications and marketplaces, which takes 3-4 hours/day. The most widely used applications, in order, are WhatsApp, Instagram, TiTok, and Twitter (X). Generally, Gen Z's ability to utilize geospatial technology integrated into devices is relatively high. The results of the analysis of the ability to use geospatial technology between Gen Z who live in urban, peri-urban, and rural areas show significant differences, with Gen Z in urban areas are more higher abilities. Likewise, geospatial literacy from the three regions shows significantly differences. The results of the homogeneous analysis show that geospatial literacy in urban and peri-urban areas is in one subset. Compared between the two regions have no significant difference. This fact showed that using several applications is more intensive by Gen Z in urban and peri-urban areas. Easier access to digital marketplace services for these two regions is driving the intensity of utilizing of social media, and marketplace applications have implications for the ability to use geospatial technology features and geospatial literacy.

Kata Kunci: *gen Z, social media, marketplace, spatial behavior, geospatial literacy*