# Factors Affecting Customer Satisfaction in Selecting Transport Network Vehicle Service (TNVS) in the Philippines

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***Abstract***
*Transport Network Vehicle Services (TNVS) like Grab and Uber have revolutionized public transportation in the Philippines, particularly in densely populated areas like Metro Manila, Cebu, and Davao. These platforms offer a convenient alternative to traditional public transport, allowing users to travel easily. Researchers have employed Structural Equation Modeling (SEM) to uncover the factors influencing customer satisfaction when choosing TNVS. They analyzed variables such as service quality, physical aspects, variability, responsiveness, and empathy, measuring them with relevant indicators. This research provides valuable insights for TNVS service providers and policymakers to enhance their services by addressing areas needing improvement. Ultimately, these findings contribute to the advancement of the TNVS industry, benefiting both providers and consumers.*

***Keywords***: *TNVS, Structural Equation Modeling, Customer Satisfaction*

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## 1. Introduction

Transportation is an integral part of modern life. Every modernized city should place a high priority on its transportation system since modern civilization demands mobility in all facets of daily life (Kumari et al., 2010). Public transportation provides commuters a convenient way to reach their destination faster and cheaper than (Narboneta. The emergence of ride-hailing services through Transport Network Vehicle Service (TNVS) platforms has transformed the transportation landscape worldwide and in the Philippines. Over the past decade, TNVS platforms such as Grab and Uber have gained tremendous popularity in major

cities like Manila, Cebu, and Davao, providing commuters with efficient, convenient, and safe transportation options. This journal aims to explore the various facets of TNVS in the Philippines, including its impact on mobility, challenges faced by drivers and passengers, regulatory frameworks, and the potential for future growth. Therefore, the advent of TNVS, the trans before sector in the Philippines, was predominantly dominated by traditional taxis and public utility vehicles (PUVs).

Commuters often face challenges such as difficulty hailing a cab, negotiating fares, and safety concerns; TNVSatforms have revolutionized how Filipinos move around cities. People can now easily book a ride through mobile applications and digitally track their driver's location in real-time pay, ensuring transparency and convenience. The introduction of TNVS has significantly improved mobility in the Philippines. Commuters no longer have to rely solely on unpredictable public transportation schedules or drive their vees in tested urban areas. With TNVS, Filipinos can access transportation services at their fingertips and enjoy comfortable journeys, often with professionally trained drivers. Moreover, TNVS has particularly benefited ineligible and efficient travel options during rush hours. Despite the numerous advantages, TNVS in the Philippines has faced its fair share of challenges. These include debates surrounding fare dynamics, passenger safety concerns, and the impact on traditional taxi drivers' livelihoods. Moreover, regulatory issues have arisen, leading to periodic suspensions and revisions of regulations governing TNVS operations. Additionally, drivers have encountered challenges such as meeting high operational costs, providing quality service, and maintaining good ratings from passengers.

The evolving regulatory framework has been a crucial aspect of TNVS in the Philippines. The Land Transportation Franchising and Regulatory Board (LTFRB) has played a central role in governing the industry, ensuring passenger safety, and monitoring operational compliance. The policies and guidelines established by the LTFRB have shaped the operations and growth of TNVS platforms, from driver requirements to vehicle standards and fare regulations. Understanding these regulations is essential to comprehending the current state of TNVS in the Philippines.

Despite the challenges, TNVS platforms continue to expand and gain traction in the Philippines. This study explored the potential future growth of TNVS services by analyzing the factors influencing customer satisfaction in selecting TNVS in the Philippines. Various parts of the world have evaluated the service quality of alternative means of transportation. ALiou et al. (2014) state that service quality has factors. It is used to gauge consumers' willingness to select a specific type of transport. Perparticipationsatisfaction surveys have been routinely used to gauge service quality unmeasured transportation, according to Expedition et al. (2016).

There are several ways to gauge the caliber of a service. Kim et al. (2018) used five criteria ('Information,' 'Mobility,' 'Comfort,' 'Convenience,' and 'Safety') to examine the service quality of transfer facilities in the rail system in South Korea. According to their Rasch analysis result, the created framework and components were simple for respondents to understand and assess. Tumsekcali et al. (2021) considered expanding the SERVQUAL model to measure customer satisfaction in Turkey. The SERVQUAL 4.0 model they suggested was suitable and may be used as a developed framework for assessing service quality. A common approach for evaluating quality in companies and marketing is SERVQUAL. According to Marco-Laraja et al. (2021), this model is regarded as a fast-assessing coconsumervalevaluating

## 2. Methodology

### 2.1. Conceptual Framework

This study has created and revealed six hypotheses and seven latent variables. Using the structural Equation Modeling (SEM) technique, the seven latent variables were employed nd simultaneously analyzed. Figure 1 displays the conceptual framework adopted for this study, followed by an analysis of related studies and the development of hypotheses.

### 2.2. Hypotheses Development

H1: Tangibility has a direcsignificanceon to Service Quality

According to Panda and Das (2014), the way customers perceive service quality is significantly impacted by the tangible and reliable aspects of the service. This applies to all stages of service delivery, including personnel involved in both the hospitality and healthcare sectors.

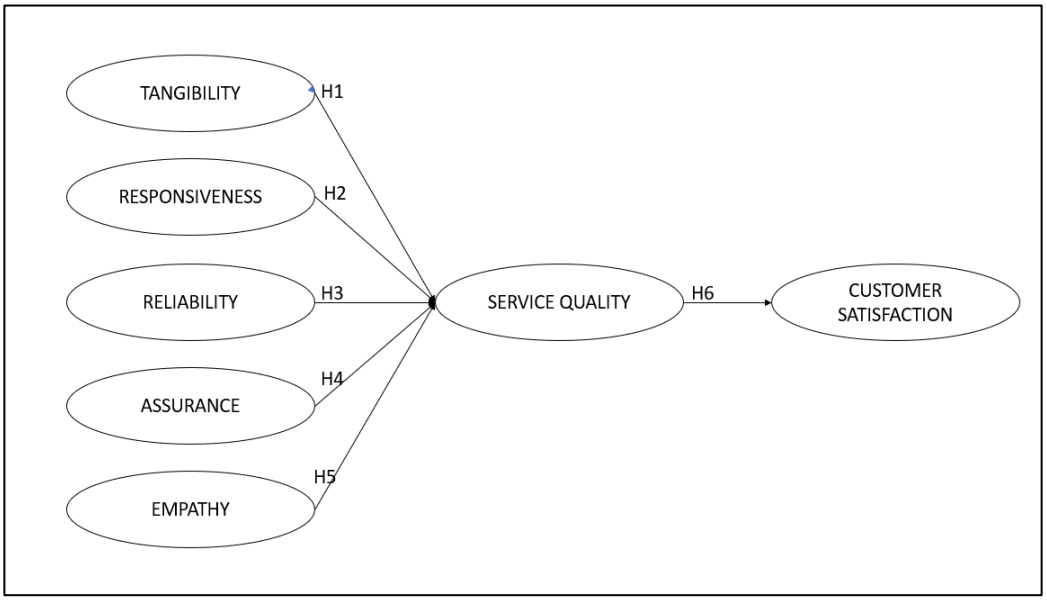


**Fig. 1** Conceptual Framework

H2: Responsiveness has a significance to Service Quality

Attentive and prompt customer service can improve perception of quality. Respond courteously and offer alternative solutions to meet customer needs. (Nambisan et al., 2016; Lee et al., 2000)

H3: Reliability has a significance to Service Quality

Reliability is essential for accountability and quality. Many previous studies have also demonstrated the importance of influencing customers' perceptions of the quality and dependability of car care services in Saudi Arabia (Korda & Snoj, 2010; Omar et al., 2015). Some of the factors that contribute to these perceptions include easy access to resources, the expertise of the professionals, effective problem solving, good communication, excellent customer care, knowledgeable staff, attentive customer service, quick service, safety, dependable employees, and minimal wait times.

H4: Assurance has a direcsignificancent to Service Quality

Staff expertise builds trust with clients and encourages repeat business. (Wu et al., 2015)

H5: Empathy has a direcsignificancent to Service Quality

Murray et al. (2019) state that empathy involves understanding the customer's perspective and anticipating their needs. The authors suggest that empathy is demonstrated through the staff's politeness, friendliness, ability to understand the client's specific needs, attentiveness, and willingness to explain the service delivery process.

H6: Service Quality has a direct significance on Customer Satisfaction

Customers judge the quality of service based on their expectations and actual experience. This affects their satisfaction, according to Susskind et al. (2003) and the expectancy-confirmation paradigm.

### 2.3. Participants

Respondents answered the survey through social media platforms like Facebook, Twitter, and Instagram. Collecting from June 2023 – July 2023, the descriptive statistic of the demographics is presented in Table 1. From the table, 48 respondents aged 24 – 57 years old have experienced using TNVS.

**Table 1.** Descriptive Statistics of Demographics (n=48)

| Characteristics | Category | n | % |
|---|---|---|---|
| *Gender* | *Male* | *28* | *58.33%* |
| | *Female* | *20* | *41.67%* |
| *Age* | *24 – 30 years old* | *33* | *68.75%* |
| | *31 – 40 years old* | *7* | *14.58%* |
| | *41 – 50 years old* | *6* | *12.50%* |
| | *51 – 60 years old* | *2* | *4.17%* |
| *Occupation* | *Employed* | *43* | *89.58%* |
| | *Self-Employed* | *5* | *10.42%* |
| | *Unemployed* | *0* | *0.00%* |
| *Monthly Income/Allowance* | *Php 20,000 and below* | *11* | *22.92%* |
| | *Php 20,000 – Php 30,000* | *10* | *20.83%* |
| | *Php 30,000 – Php 40,000* | *4* | *8.33%* |
| | *Php 40,000 – Php 50,000* | *5* | *10.42%* |
| | *Php 50,000 and above* | *18* | *37.50%* |

### 2.4. Questionnaire

The indicators for the various latent variables are shown in Table 2 and have been taken from several research studies. To assess seven latent variables, a total of 27 constructs were considered. The latent variables considered in the questionnaire are Tangibility (TA), Responsiveness (RS), Reliability (RL), Assurance (A), Empathy (E), Service Quality (SQ), and Customer Satisfaction (CS).

**Table 2.** Measurement items and references

| Factor | Items | Questions | Reference |
|---|---|---|---|
| *Tangibility* | *T1* | *The seats are clean* | *Eboli and Mazzulla (2015)* |
| | *T2* | *The seats are comfortable.* | *Barabino et al. (2012)* |
| | *T3* | *The appearance of the driver is neat and clean* | *Munim and Noor (2020)* |
| | *T4* | *The TNVS is modern-looking.* | *Grujičić et al., 2014* |
| *Responsiveness* | *RS1* | *I can easily ride TNVS even in rush hours* | *Grujičić et al., 2014* |
| | *RS2* | *I always arrive at my destination on time when riding TNVS.* | *Barabino et al. (2012)* |
| | *RS3* | *My travel time when riding TNVS is satisfactory.* | *Grujičić et al., 2014* |
| *Reliability* | *RL1* | *It is easy to find the loading and unloading areas of TNVS* | *Liou et al. (2014)* |
| | *RL2* | *TNVS never breaks down or experiences mechanical failure on the road* | *OJO et al., 2014* |
| | *RL3* | *The price fee for the ride is affordable* | *de Oña et al. (2013)* |
| | *RL4* | *Driver/conductor always returns the correct change to the passengers.* | *(Mikhaylov et al., 2015)* |
| *Assurance* | *A1* | *The driver drives smoothly (no sudden breaks)* | *Liou et al. (2014)* |
| | *A2* | *Driver follows the road signs and signals* | *Munim and Noor (2020)* |
| | *A3* | *The driver knows the route very well and avoids traffic jams.* | *Grujičić et al., 2014* |
| | *A4* | *I feel safe riding PUV* | *Grujičić et al., 2014* |
| *Empathy* | *E1* | *The driver is polite and friendly when communicating with passengers* | *Liou et al. (2014)* |
| | *E2* | *The driver assists disabled passengers and senior citizens.* | *Mikhaylov et al. (2015)* |
| | *E3* | *TNVS driver routes are designed perfectly (no additional routes needed)* | *Mikhaylov et al. (2015)* |
| *Service quality* | *SQ1* | *Overall, the service of the TNVS is safe and secure* | *Morton et al. (2016); Ojha (2020)* |
| | *SQ2* | *Overall, the service of the TNVS is worth its price.* | |
| | *SQ3* | *I have a positive attitude towards the quality of the service of this TNVS.* | |
| | *SQ4* | *I have fewer complaints about the service of the TNVS.* | |
| *Customer Satisfaction* | *CS1* | *Overall, I am happy with the service of the TNVS* | *Sam et al. (2018)* |
| | *CS2* | *Overall, I am satisfied with the service of the TNVS.* | |
| | *CS3* | *I am likely to use TNVS again.* | |
| | CS4 | I am likely to recommend riding TNVS to my friends and family. | |

### 2.5. Structural Equation Modeling

This study utilized structural equation modeling (SEM) to identify the significant factors affecting customer service quality and satisfaction using TNVS. SEM is a statistical technique used to analyze the relationships among different variables. It is a multivariate statistical technique that allows researchers to test complex theoretical models by examining the relationships between measured variables and their underlying latent constructs. SEM can be used to test causal relationships among variables and to test models that include both observed and latent variables. Several studies used structural equation modeling to investigate the relationship between food quality, service quality, customer satisfaction, and loyalty in Chinese restaurants (Chen & Chen, 2018) and to investigate the relationship between sustainable tourism development, tourist experiences, and sustainable behavior intentions (Koens et al., 2018).

## 3. Results and Discussion

This study investigated the causal relationship between latent variables, which are Assurance (A), Empathy (E), Reliability (RL), Responsiveness (RS), Tangibility (T), Service Quality (SQ), and Customer Satisfaction (CS).

**Table 3.** Reliability and Validity

| Variable | Item | Mean | Standard deviation |
|---|---|---|---|
| *Tangible* | *T1* | *3.78* | *0.41* |
| | *T2* | *3.59* | *0.54* |
| | *T3* | *3.61* | *0.54* |
| | *T4* | *3.88* | *0.45* |
| *Responsiveness* | *RS1* | *1.81* | *1.02* |
| | *RS2* | *3.85* | *0.35* |
| | *RS3* | *3.98* | *0.27* |
| *Reliability* | *RL1* | *3.93* | *0.41* |
| | *RL2* | *3.85* | *0.42* |
| | *RL3* | *3.42* | *0.66* |
| | *RL4* | *4.07* | *0.34* |
| *Assurance* | *A1* | *3.63* | *0.57* |
| | *A2* | *3.95* | *0.31* |
| | *A3* | *4.02* | *0.47* |
| | *A4* | *3.90* | *0.37* |
| *Empathy* | *E1* | *3.98* | *0.27* |
| | *E2* | *3.98* | *0.41* |
| | *E3* | *3.98* | *0.15* |
| *Service Quality* | *SQ1* | *3.93* | *0.34* |
| | *SQ2* | *3.93* | *0.26* |
| | *SQ3* | *3.95* | *0.22* |
| | *SQ4* | *3.95* | *0.22* |
| *Customer Service* | *CS1* | *3.95* | *0.31* |
| | *CS2* | *3.98* | *0.27* |
| | *CS3* | *4.20* | *0.40* |
| | *CS4* | *4.10* | *0.30* |

The findings of this study underscore the importance of various factors in determining customer satisfaction in selecting TNVS services in the Philippines. The Service Quality factor emerged as the most crucial factor, implying that customers highly value ease of booking and shorter waiting times and travel costs. TNVS companies should focus on developing user-friendly mobile applications and implementing efficient booking systems to enhance convenience.

The aim of using Cronbach $\alpha$ and composite reliability (CR) was to establish the presence of reliability in the data and confirm that the instrument accurately measures what it is intended to measure. In addition to reliability, two commonly employed scales, factor loading and average variance extracted (AVE), were used to assess the validity of the research instrument. The reliability and validity measures are presented in Table 4.

**Table 4.** Reliability and Validity

| Latent Variable | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|
| *ASSURANCE* | *0.837* | *0.924* | *0.892* | *0.681* |
| *CUSTOMER SATISFACTION* | *0.745* | *0.988* | *0.805* | *0.544* |
| *EMPATHY* | *-3.949* | *-8.008* | *0.194* | *0.680* |
| *RELIABILITY* | *0.133* | *0.851* | *0.674* | *0.647* |
| *RESPONSIVENESS* | *0.240* | *0.819* | *0.596* | *0.471* |
| *SERVICE QUALITY* | *0.828* | *0.865* | *0.876* | *0.593* |
| *TANGIBILITY* | *0.851* | *0.913* | *0.897* | *0.688* |

**Table 5.** Direct, indirect, and total effects

| No | Variable | Direct Effect | P-Value | Indirect Effect | P-Value | Total Effect | P-Value |
|---|---|---|---|---|---|---|---|
| *1* | *Assurance - Service Quality* | - | - | *0.277* | *0.414* | *0.414* | *0.414* |
| *2* | *Empathy - Service Quality* | - | - | *0.08* | *0.12* | *0.12* | *0.12* |
| *3* | *Reliability - Service Quality* | - | - | *-0.108* | *-0.161* | *-0.161* | *-0.161* |
| *4* | *Responsiveness - Service Quality* | - | - | *0.236* | *0.352* | *0.352* | *0.352* |
| *5* | *Service Quality - Customer Satisfaction* | - | - | - | *0.669* | *0.669* | *0.669* |
| *6* | *Tangibility - Service Quality* | - | - | *0.276* | *0.276* | *0.276* | *0.276* |

The selection of Transportation Network Vehicle Services (TNVS) is a critical decision for customers who prioritize safety assurance, reliability, driver behavior, and professionalism. To ensure customer satisfaction and build loyalty, TNVS providers must ensure that their drivers are knowledgeable and fully equipped with safety measures. During rush hours, TNVS companies must provide vehicles, and fares should be reasonable to address reliability concerns. Empathy also plays a significant role in customer satisfaction. Therefore, TNVS firms should prioritize driver training programs that focus on professionalism and polite behavior to increase customer satisfaction and loyalty.

The study underlines the importance of assurance in customer satisfaction when selecting TNVS services. By prioritizing safety, reliability, driver behavior, professionalism, and service quality, TNVS companies can enhance their services. TNVS providers should prioritize safety measures such as background checks, vehicle inspections, and driver training programs to enhance customers' sense of security.

TNVS providers can ensure service reliability by implementing features such as estimated arrival times and driver tracking. These measures help customers plan their journeys and reduce concerns about delays or cancellations, leading to increased satisfaction. Quality control measures, such as setting service standards, conducting regular inspections, and enforcing quality control measures, can assure customers of receiving consistent and high-quality service.

Overall, delivering superior service quality is crucial for TNVS companies to distinguish themselves from competitors and significantly contributes to customer satisfaction and loyalty.

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**References**

Kumari, S.M., & Geethanjali, N. (2010). A survey on shortest path routing algorithms for public transport travel. Global Journal of Computer Science and Technology, 9, 73–75.

Narboneta, C., & Teknomo, K. (2016). A study of Metro Manila's public transportation sector: Implementing a Multimodal Public Transportation Route Planner.

Liou, J.J.H., Hsu, C.-C., & Chen, Y.-S. (2014). Improving transportation service quality based on information fusion. Transportation Research Part A: Policy and Practice, 67, 225–239. doi: 10.1016/j.tra.2014.07.007.

Guirao, B., García-Pastor, A., & López-Lambas, M.E. (2016). The importance of service quality attributes in public transportation: Narrowing the gap between scientific research and practitioners' needs. Transport Policy, 49, 68–77. doi: 10.1016/j.tranpol.2016.04.003.

Kim, J., Schmöcker, J.-D., Yu, J.W., & Choi, J.Y. (2018). Service Quality Evaluation for urban rail transfer facilities with Rasch analysis. Travel Behaviour and Society, 13, 26–35. doi: 10.1016/j.tbs.2018.05.002.

Tumsekcali, E., Ayyildiz, E., & Taskin, A. (2021). Interval-valued intuitionistic fuzzy AHP-WASPAS based public transportation service quality evaluation by a new extension of SERVQUAL model: P-SERVQUAL 4.0. Expert Systems with Applications, 186, 115757. doi: 10.1016/j.eswa.2021.115757.

Marco-Laraja, B., Ruiz-Fernandez, L., Seva-Larrosa, P., & Sanchez-Garcia, E. (2021). Hotel strategies in times of COVID-19: A dynamic capabilities approach. Anatolia. Doi: 10.1080/13032917.2021.1969960.

Panda, T., & Das, S. (2014). The Role of Tangibility in Service Quality and Its Impact on External Customer Satisfaction: A comparative study of hospital and hospitality sector.

Nambisan, P., Gustafson, D. H., Hawkins, R., & Pingree, S. (2016). Social support and responsiveness in online patient communities: Impact on service quality perceptions. Health Expectations, pp. 19, 87–97. doi: 10.1111/hex.12332.

Lee, H., Lee, Y., & Yoo, D. (2000). The determinants of perceived service quality and its relationship with satisfaction. Journal of Services Marketing, 14, 217–231. doi: 10.1108/08876040010327220.

Korda, A. P., & Snoj, B. (2010). Development, validity, and reliability of perceived service quality in retail banking and its relationship with perceived value and customer satisfaction. Management Global Review, 8, 187.

Omar, H. F. H., Saadan, K. B., & Seman, K. B. (2015). Determining the influence of the reliability of service quality on customer satisfaction: The case of Libyan E-commerce customers. International Journal of Learning and Development, 5, 86–89. doi: 10.5296/ijld.v5i1.6649.

Wu, Y.-C., Tsai, C.-S., Hsiung, H.-W., & Chen, K.-Y. (2015). The linkage between frontline employee service competence scale and customer perceptions of service quality. Journal of Services Marketing, 29, 224–234. doi: 10.1108/JSM-02-2014-0058.

Murray, J., Elms, J., & Curran, M. (2019). Examining empathy and responsiveness in a high-service context. International Journal of Retail & Distribution Management, 2019, p. 16. doi: 10.1108/IJRDM-01-2019-0016.

Susskind, A. M., Kacmar, K. M., & Borchgrevink, C. P. (2003). Customer service providers' attitudes about customer service and customer satisfaction in the customer-server exchange. Journal of Applied Psychology, 88, 179. doi: 10.1037/0021-9010.88.1.179.

Teas, R. K. (1993). Consumer expectations and the measurement of perceived service quality. Journal of Professional Services Marketing, pp. 8, 33–54. doi 10.1080/15332969.1993.9985048.

Koens, K., Postma, A., & Papp, B. (2018). Sustainable tourism development and tourists' experiences: Investigating the relationship between destination sustainability performance and tourist happiness. Journal of Sustainable Tourism, 26(2), 169-186.

Adya, A., Bahl, P., Padhye, J., Wolman, A., & Zhou, L. (2004). A multi-radio unification protocol for IEEE 802.11 wireless networks. In Proceedings of the IEEE 1st International Conference on Broadnets Networks (BroadNets'04). IEEE, Los Alamitos, CA, 210–217. Doi: 10.1109/BROADNETS.2004.8.

Anzaroot, S., & McCallum, A. (2013). UMass Citation Field Extraction Dataset. Retrieved May 27, 2019, from http://www.iesl.cs.umass.edu/data/data-umasscitationfield.

Fischler, M. A., & Bolles, R. C. (1981). Random sample consensus: A paradigm for model fitting with applications to image analysis and automated cartography. Communications of the ACM, 24(6), 381–395. doi: 10.1145/358669.358692.

Finn, C. (2018). Learning to Learn with Gradients (PhD Thesis). EECS Department, University of Berkeley.

Kleinberg, J. M. (1999). Authoritative sources in a hyperlinked environment. Journal of the ACM, 46(5), 604–632. doi: 10.1145/324133.324140.

Van Gundy, M., Balzarotti, D., & Vigna, G. (2007). Catch me, if you can: Evading network signatures with web-based polymorphic worms. In Proceedings of the first USENIX Workshop on Offensive Technologies (WOOT '07). USENIX Association, Berkeley, CA, Article 7, 9 pages.

Demmel, J. W., Hida, Y., Kahan, W., Li, X. S., Mukherjee, S., & Riedy, J. (2005). Error Bounds from Extra Precise Iterative Refinement. Technical Report No. UCB/CSD-04-1344. University of California, Berkeley.

Harel, D. (1979). First-Order Dynamic Logic. Lecture Notes in Computer Science, Vol. 68. Springer-Verlag, New York, NY. doi: 10.1007/3-540-09237-4.

Jerald, J. (2015). The VR Book: Human-Centered Design for Virtual Reality. Association for Computing Machinery and Morgan & Claypool.

Prokop, E. (2018). The Story Behind. Mango Publishing Group. Florida, USA.

R Core Team. (2019). R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.

Reid, B. K. (1980). A high-level approach to computer document formatting. In Proceedings of the 7th Annual Symposium on Principles of Programming Languages. ACM, New York, pp. 24–31. doi: 10.1145/567446.567449.

Smith, J. R., & Chang, S.-F. (1997). Visual Seek: A fully automated content-based image query system. In Proceedings of the fourth ACM International Conference on Multimedia (MULTIMEDIA '96). Association for Computing Machinery, New York, NY, USA, pp. 87–98. doi: 10.1145/244130.244151.

TUG. (2017). Institutional members of the LaTeX Users Group. Retrieved May 27, 2017, from http://wwtug.org/instmem.html.

Yilmaz, A., Javed, O., & Shah, M. (2006). Object tracking: A survey. ACM Computing Surveys, 38(4), 13–es. Doi: 10.1145/1177352.1177355.