XXIX International Scientific Conference

Strategic Management

and Decision Support Systems
in Strategic Management

SM2024

Subotica (Serbia), 17-18 May, 2024

Marijana Petrović
Academy of technical and art applied studies
Belgrade, Serbia
e-mail: marijana.petrovic@ict.edu.rs

IT CONSUMERIZATION – A SYSTEMATIC MAPPING STUDY

Abstract: The utilization of personal IT devices for business purposes, either alongside or instead of official IT infrastructure, is called IT consumerization. This trend is driven by consumers ' desire to choose the technology for work based on their own preferences and requirements. Its ubiquity in recent years has brought into focus the importance of understanding this phenomenon, both for researchers and decision makers. Thus, this study aims to systematically gather, organize, and synthesize existing scientific literature on IT consumerization, aligning with the research problem that entails identifying the current state, trends, and gaps in the academic literature. The research methodology is grounded in systematic mapping and categorization of literature by publication year, source, nature, publication type, and classification of relevant works according to research topics. The findings will offer an overview of key references and themes, facilitating a deeper insight into key aspects of this phenomenon, while also pinpointing knowledge gaps to lay the groundwork and provide direction for future research.

Keywords: IT consumerization, systematic mapping study

1. INTRODUCTION

Consumerization of IT (CoIT) is the trend of using personal technology, i.e. devices (most often smartphones, laptops, tablets) and applications (for productivity, collaboration, file sharing, etc.) for performing business tasks. This trend has emerged due to several technological and market factors, including the miniaturization of electronics, the increased power and decreased prices of computers, the availability of affordable internet services, the rise of ubiquitous computing, smartphones, web 2.0, etc. These factors have collectively influenced today's technology users through personal IT devices. The rapid development and focus of personal devices manufacturers on an intuitive, enjoyable, and personalized technology experiences have not only shaped users' technical skills and knowledge but also their expectations of technology when entering a workforce. However, the advancement of business technology has not kept pace with personal technology, which has resulted in the unfulfilled expectations of users, who turn to their own IT devices from an outdated, underperforming, and unintuitive business systems to expedite and simplify their work processes (Petrović & Sakal, 2024). In recent years, this trend has become more frequent among employees (Burleson, Grover, Thatcher, & Sun, 2021). Experts foresee its ongoing impact on the future of work (Rudly, 2022), underscoring the significance of addressing this subject. Consequently, this paper aims to address the research problem of identifying the current state, trends, and gaps in the scientific literature regarding IT consumerization.

The objective of this paper is to systematically gather, organize, and summarize existing scientific literature on IT consumerization, aligning with the established research problem. This approach will help delineate trends and future research directions through a systematic mapping study. An examination of the current state enables researchers to identify previously explored topics and areas necessitating further attention and analysis, while forecasting trends and research directions aids in anticipating changes, challenges, opportunities, and formulating appropriate responses. The subsequent sections of the paper will delve into the research design and methodology, following the stages of the mapping study process, followed by a discussion, limitations and future research directions.

2. SYSTEMATIC MAPPING STUDY

A systematic mapping study (SMS) is a form of a systematic literature review (SLR) (Kitchenham, Budgen, & Brereton, 2011) that is primarily focused on structuring a particular thematic area of research. It involves the identification of available research in the literature, their analysis and categorization, in order to offer a comprehensive overview of a particular research topic (Salama, Bahsoon, & Bencomo, 2017). The organized summary of knowledge resulting from SMS can lay the foundations for further research (García-Mireles, Moraga, García, Calero, & Piattini, 2017) and future SLR (Petersen, Vakkalanka, & Ludwik, 2015), as it identifies which categories are well covered in terms of the number of publications and indicates to a research gap (Petersen, Feldt, Mujtaba, & Mattsson, 2008). The methodology includes a thorough search of selected sources, extraction of key information, analysis of identified topics, and development of a clear overview of current knowledge on a specific topic through stages such as: planning, execution of SMS, and reporting of results (Petersen, Vakkalanka, & Ludwik, 2015).

2.1. Planning

The first step of the planning phase is defining the research questions (Salama, Bahsoon, & Bencomo, 2017). Unlike SLR, which typically pose highly specific research questions, in SMS questions are general and broad in order to achieve the objective of categorizing topics covered in the literature and uncovering research trends. An example of a question suitable for an SMS study is: "What do we know about a certain topic?" (Petersen, Vakkalanka, & Ludwik, 2015). Accordingly, the following research questions were formulated within the framework of this paper:

- RQ1: "What are the prevailing trends and studied areas within the domain of CoIT and how can they be categorized?"
- RQ2: "Which areas require more research?".

Within the first research question, sub-questions can be asked that will help in finding answers, such as:

- RQ1a: "What are the trends in the frequency of publication of papers by year, place of publication (journal/conference paper) and the nature of the research (theoretical/empirical)?";
- RQ1b: "What are the research types (methodologies and approaches) of the identified studies?";
- RQ1c: "What is the focus of the study, i.e. research context?";

Sub-questions 1a and 1b will provide a comprehensive overview of the methodological landscape, while the importance of sub-question 1c is reflected in enabling a clear categorization, as the context of the study will facilitate the identification of key themes for the categorization of papers, as well as their comparison in different conditions and settings.

In the second step of the planning phase, the research scope was defined to encompass all papers pertinent to the topic area (Salama, Bahsoon, & Bencomo, 2017). As the term CoIT was defined in 2004 in a position paper (Moschella, Neal, Opperman, & Taylor, 2004), that year was taken as the initial limit of the time frame. Then, in the third step, the research strategy was formulated, encompassing the selection of sources and keyword strings to search for studies across electronic libraries and indexing systems (Salama, Bahsoon, & Bencomo, 2017). As part of the strategy, it was defined that the KOBSON portal (Service of the Consortium of Serbian Libraries for Unified Procurement) will be used to search for studies, a platform that facilitates access to a number of subscribed electronic resources. It provides multidisciplinary content, the ability to connect users to various academic databases and platforms that host electronic resources, as well as access to a wide range of academic journals, conference proceedings and electronic books (https://kobson.nb.rs). The identification of keywords was based on the term CoIT. Therefore, the strings used in the search were: "IT consumerization" or "Consumerization of IT". A paper was considered a candidate for SMS if it explicitly mentioned CoIT or one of its forms (Shadow IT - SIT, Bring Your Own Device - BYOD). Because the area of interest is focused only on research trends, the search requirements were less stringent (Petersen, Vakkalanka, & Ludwik, 2015).

In the fourth step of the planning phase, the criteria for the selection of relevant studies, i.e., the inclusion/exclusion of papers, were defined. This SMS included empirical and non-empirical studies published in scientific journals and conferences (García-Mireles, Moraga, García, Calero, & Piattini, 2017). The criteria for inclusion/exclusion of papers were based on limitations in terms of language, place of publication, time period, relevance of the topic of the article and its availability. Inclusion criteria included:

- Papers written in English;
- Peer-reviewed papers published in a journal or at a conference;
- Papers from the time period from 2004 to 2024;
- Papers dealing with the topic of CoIT;
- Papers with full-text available through chosen databases/aggregators;

Accordingly, the exclusion criteria were:

- If the paper is not written in English;
- Books and gray literature;
- If the paper does not deal with the topic of CoIT;
- If the paper is a duplicate of another study;
- If the full text of the work is not available.

2.2. Execution of SMS

The SMS implementation phase consists of the following sub-phases: source search, study selection, data extraction and categorization, and their analysis and mapping.

The search was conducted in the sources defined by the strategy according to keywords. For the automated search of publications within the KOBSON portal, the following sources were employed: indexed databases such as Web of Science and SCOPUS, aggregators including EBSCO, DOAJ (Directory of Open Access Journals) and publishers like Emerald Group Publishing, Wiley online library, SAGE Journals and Springer Link. The date of access to papers on KOBSON is 01.01.2024. year, which is also the upper time limit of the scope of the study. The search string was tested in the Web of Science database, after which it was applied to other databases/aggregators/publishers. Search results showing hits by key words are given in Table 1.

Table 1: Results of the automated search

Keywords: ("IT consumerization") OR ("Consumerization of IT")		
Bibliographic databases, aggregators and publishers	**Provider**	**Number of hits by title and abstract**
Web of Science	Thomson Reuters	63
Scopus	Elsevier	115
EBSCO Academic Source Premier + EBSCO Business Source Premier	EBSCO publishing	122
DOAJ		7
Emerald Group Publishing	Emerald Group Publishing	54
Wiley	Wiley	69
SAGE Journals		13
Springer Link	Springer	77

Source: Author, 2024.

Primary studies were identified through manual searching conducted in two stages. In the first stage of the identification process, the title, key words and abstract were read with the application of the inclusion/exclusion criteria in order to determine the relevance of the paper. In the second phase, for studies that couldn't be initially included in the SMS corpus based on the first phase, the complete text of each paper was thoroughly examined, applying the selection criteria. Secondary studies (literature reviews, taxonomies) were also taken into account. The quality of papers was not evaluated, because according to (Kitchenham, Budgen, & Brereton, 2011) it is not a necessary step for the SMS study. Study selection resulted in a list of 125 relevant papers, after removing duplicates.

In the subsequent phase of the SMS study, each extracted paper was reviewed to identify keywords and concepts in order to categorize the papers (Salama, Bahsoon, & Bencomo, 2017). For the purpose of categorization, factors such as the covered topic, location, nature, and type of research were taken into account. These factors align with the criteria outlined by (Kitchenham, Budgen, & Brereton, 2011), which typically serve as the basis for defining categories in publications. Extracted keywords served as the means for establishing a categorization framework within MS Excel, wherein the author manually crafted custom category ranges („Data classification methods", n.d.). Subsequently, the articles were sorted according to their respective categories, and their distribution was visually depicted through graphical representation (Petersen, Vakkalanka, & Ludwik, 2015).

After extracting and categorizing the studies, the acquired findings underwent analysis. Following this a systematic mapping was created (Salama, Bahsoon, & Bencomo, 2017) which was elaborated in the subsequent chapter.

2.3. Reporting of results

In response to RQ1a, the trends in the frequency of publication of papers by year and place of publication are illustrated in Figure 1.
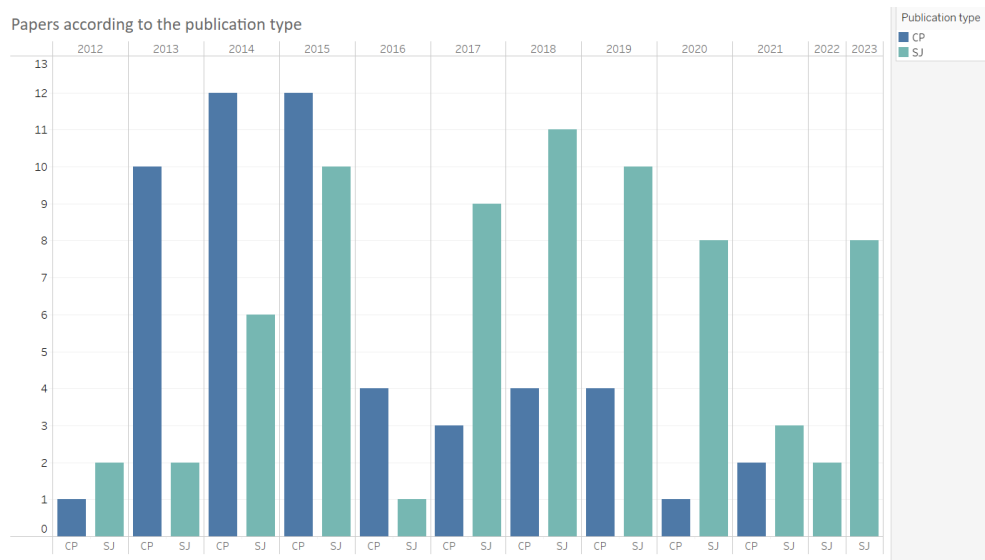
Figure 1. Papers according to year and place of publication
Source: Author, 2024

Of the total number of papers, 58% were published in scientific journals (SJ), and 42% at conferences and conference proceedings (CP). There is a noticeable downward trend of papers from conferences from 2015 to 2021, so that in the previous two years no conference papers appeared in the researched databases at all. On the other hand, the representation of scientific journals varies from year to year, but the number of these papers increased from only two in 2022 to nine in 2023.

The following graph illustrates the representation of papers categorized according to the nature of the study.
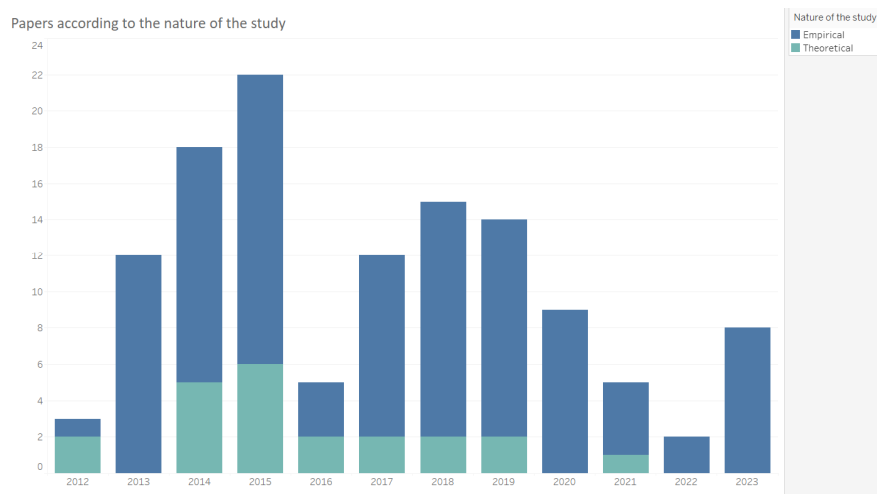

Figure 2. Papers according to the nature of the study
Source: Author, 2024

Only 18% of papers are theoretical, and their distribution over the years indicates a downward trend. The following graph shows the representation of various types of papers by year.
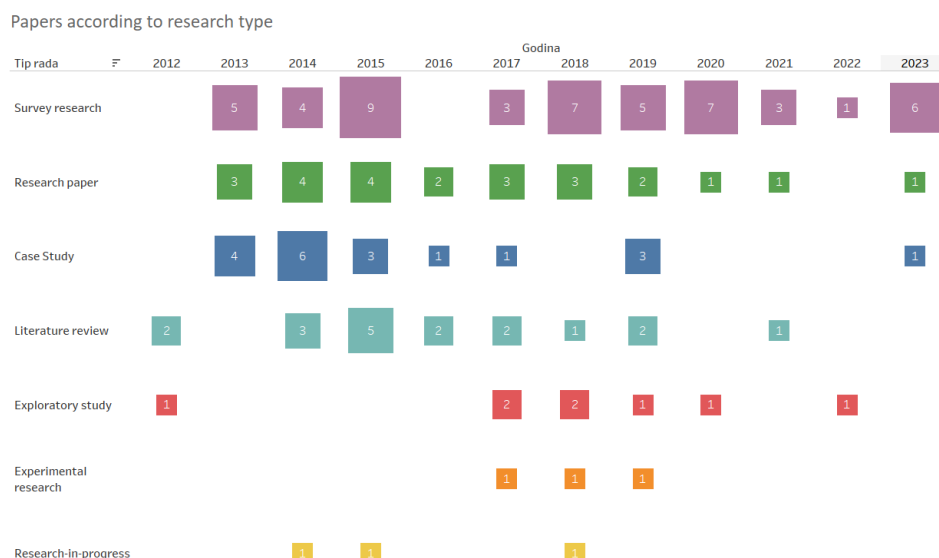
Papers according to research type

Figure 3. Types of papers by year
Source: Author, 2024

In response to research question 1b, the most represented types of studies were identified in the extracted corpus, namely: survey research (40%), research papers (19%), case studies (15%) and literature reviews (15%). Trend indicates that over the last three years, there has been a predominance of surveys, research papers, and literature reviews, while other types of studies are either minimally represented or not represented at all.

The categorization according to the covered topic, subtopics and the corresponding number of papers addressing those subtopics is presented in Figure 4, answering research question 1c.
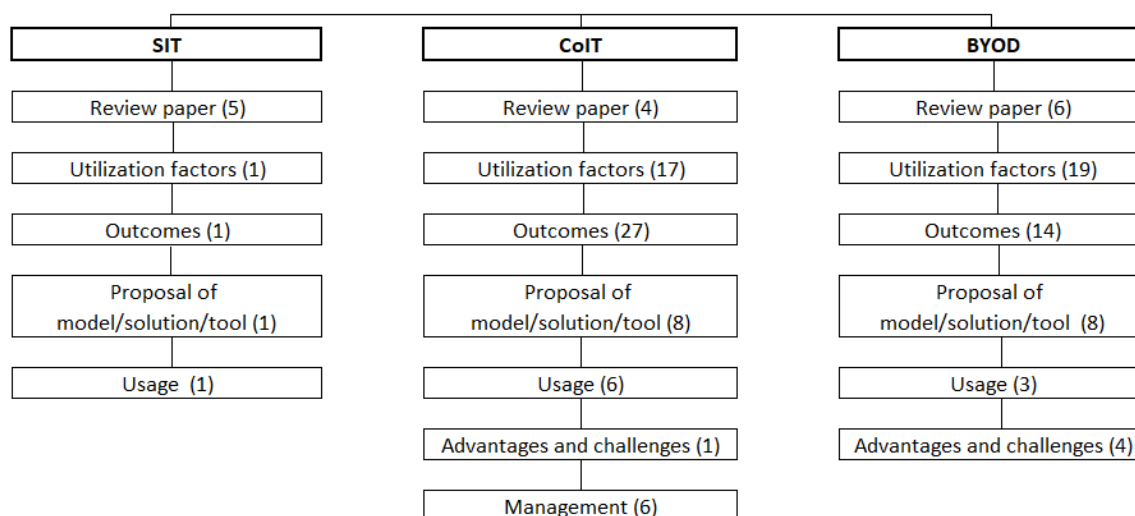

Figure 4. Themes and subthemes identified in the literature
Source: Author, 2024

The literature highlights three main themes: SIT (IT consumerization that is done clandestinely, without the knowledge of the employer), CoIT and BYOD (IT consumerization that is done with control and rules of use set by the employer). Papers studying SIT represent the lowest proportion (about 6%), publications addressing the BYOD phenomenon are significantly more numerous (42%), while the most abundant group comprises sources focusing on CoIT (52%).

Observing the focus of the study in accordance with research question 1c, the following subthemes are distinguished: review papers, papers dealing with the factors of using personal devices for business purposes, their outcomes, the use and proposal of specific models/solutions/tools for the use of CoIT, advantages, challenges and management. The largest number of papers (almost 60%) deals with outcomes and factors of use. Looking at the contexts of those papers, 28% of them is dealing with a specific context, such as: healthcare (8 papers), education (6 papers), public sector (5 papers), certain industries such as energy, financial organizations, libraries etc. (9 papers), the context of small and medium-sized enterprises (4 papers) or knowledge workers (3 papers)), Additionally, specific types of CoIT are

addressed, including smartphone usage (7 papers), cloud (2 papers), mobile applications (1 paper), mobile application stores (1 paper), social media (1 paper), Mobile Device Management system (1 paper), file sharing context (1 paper). Furthermorea particular group of respondents is studied, including students, students with work experience and elementary school students (13 papers), managers (4 jobs), Chief Information Officer (CIO) (2 jobs), IT departments (2 jobs) and employees in the aforementioned mentioned specific industry branches.

Within the sub-theme "Factors of use", only 38% of papers deal with non-specific context/elements/respondents, and this is a potential research gap. In the case of the "Outcomes" sub-theme, 59% of papers covered the wider context of the consequences and positive impacts of CoIT. The "Model/Solution/Tool Proposals" mostly deal with employee security and control issues and this area seems to be well covered. The subtopic "Usage of CoIT" has only 1 out of 9 papers that is not in a specific context of use, which is understandable given that the use of personal devices/applications can only be described and investigated in the context in which it occurs. The sub-topic "Advantages and challenges" has been fully addressed only for specific contexts (education, libraries, health, SMEs, knowledge workers), so there is an opportunity to investigate it within a broader context.

3. DISCUSSION

This paper provides a comprehensive summary of current information sourced from scientific and professional outlets concerning the topic of CoIT, serving as the foundation for further research - a systematic literature review. The findings reveal a shift in publication trends with an increasing proportion of papers appearing in scientific journals compared to conference papers, particularly notable in recent years where no conference papers were found in the surveyed scientific databases. Empirical studies constitute over 80% of the literature, showing a rising trajectory. Predominantly, the works comprise surveys, research papers, case studies, and literature reviews.

The themes that emerged from the extracted literature can be categorized into different types of CoIT (CoIT, SIT and BYOD) encompassing aspects such as CoIT usage, influencing factors, outcomes, management, advantages, and challenges. A large number of papers delve into specific contexts, elements and respondents, especially within empirical studies. Notably, a research gap is identified regarding the broader context of benefits and challenges, as well as the factors influencing CoIT usage.

Among papers examining usage factors with non-specific context/elements/respondents, a significant portion focuses on acceptance of company restrictions on personal device use, rather than exploring driving factors of CoIT adoption, indicating an under-researched area. Moreover, while security management is extensively covered in the literature, there is a dearth of works addressing CoIT management within the context of risk and opportunity optimization, presenting a potential avenue for future research.

4. LIMITATIONS AND FUTURE RESEARCH

This study potentially faces a bias concern, as the search process, data extraction, and categorization were performed by a single researcher, creating a categorization scheme of themes and subthemes manually using custom range of categories that she defined (Salama, Bahsoon, & Bencomo, 2017). Although (García-Mireles, Moraga, García, Calero, & Piattini, 2017) suggest that the process of searching papers need not be exhaustive, but rather subject to revision, questions may be arise regarding the study's coverage. A limitation of the search process in this paper may be that only the KOBSON portal was searched, although the author believes that a significant portion of relevant papers on the topic has been covered. Additionally, only a certain set of criteria was employed in this study, with the aim of creating a basic mapping according to year, place, nature, type and context of research (Salama, Bahsoon, & Bencomo, 2017), serving as a foundation for a systematic literature review.

Future research will prioritize the investigation of identified research gaps, with a particular focus on understanding the drivers behind CoIT adoption, exploring the benefits and challenges associated with CoIT implementation, and developing effective strategies for CoIT management. Among the driving factors, a more detailed examination could delve into technological, organizational, sociocultural, economic and other factors that encourage users to utilize their personal IT devices for business purposes. Regarding the advantages and challenges framework, a deeper analysis could be conducted on the positive and negative impacts of CoIT on employees, including its effects on productivity, flexibility, satisfaction, security, privacy, and related aspects. Additionally, the less-explored realm of managing IT consumerization could be further investigated by examining the policies and techniques utilized by organizations to mitigate potential risks and leverage opportunities of IT consumerization.

REFERENCES

Abolfotouh, M. A., BaniMustafa, A., Salam, M., Al-Assiri, M., & Aldebasi B. Bushnak, I. (2019). Use of smartphone and perception towards the usefulness and practicality of its medical applications among healthcare workers in Saudi Arabia. *BMC Health Services Research, 19.* doi:https://doi.org/10.1186/s12913-019-4523-1

Adams, D. A., Ives, B., & Junglas, I. (2013). Tactical NAV: Innovation in the US Army. *Journal of Information Technology Teaching Cases*. doi:https://doi.org/10.1057/jittc.2012.5

Afful-Dadzie, E., Clottey, D. N., Kolog, E. A., & Lartey, S. O. (2023). Afful-Dadzie, Eric; Clottey, David Nii KlotInformation technology consumerization in primary healthcare delivery: antecedents, fit-viability and perceived empowerment. *Health and Technology, 13*, 413-425. doi:https://doi.org/10.1007/s12553-023-00749-z

Ahuja, S., & Gallupe, R. B. (2015). A Foundation for the Study of Personal Cloud Computing in Organizations. *Twenty-first Americas Conference on Information Systems.* Puerto Rico.

Akin-Adetoro, A., & Kabanda, S. (2021). Factors affecting the adoption of BYOD in South African small and medium enterprises. *The Electronic Journal of Information Systems in Developing Countries, 87*(1). doi:https://doi.org/10.1002/isd2.12185

Aldini, A., Seigneur, J.-M., Lafuente, C. B., Titi, X., & Guislain, J. (2017). Design and validation of a trust-based opportunity-enabled risk management system. *Information and Comupter Security, 25*(1), 2-25. doi:https://doi.org/10.1108/ics-05-2016-0037

Al-Okaily, R. (2013). Mobile Learning and BYOD: Implementations in an Intensive English Program. *Learning and Teaching in Higher Education: Gulf Perspectives, 10*(2). doi:https://doi.org/10.18538/lthe.v10.n2.141

ArcGIS Pro. (n.d.). Data classification methods. Retrieved 1 20, 2024, from https://pro.arcgis.com/en/pro-app/latest/help/mapping/layer-properties/data-classification-methods.htm

Arpaci, I. (2015). A Qualitative Study on the Adoption of Bring Your Own Device (BYOD) Practice. *International Journal of E-Adoption, 7*(2), 1-14. doi:https://doi.org/10.4018/ijea.2015070101

Auinger, A., & Wetzlinger, W. (2019). Prohibiting Bring Your Own Device (BYOD) in Companies: Effectiveness and Efficiency vs. Satisfaction. *6th International Conference on HCI in Business, Government, and Organizations, HCIBGO 2019, held as part of the 21st International Conference on Human-Computer Interaction, HCI International 2019*, (pp. 3-21). doi:https://doi.org/10.1007/978-3-030-22338-0_1

Babu, H. R. (2020.). Consumerization of IT: Nexus of SMAC Technology adoption by the Indian Libraries . *Library Philosophy and Practice (e-journal). 4472.*

Baillette, P., & Barlette, Y. (2018). BYOD-related innovations and organizational change for entrepreneurs and their employees in SMEs: The identification of a twofold security paradox. *Journal of Organizational Change Management*. doi:https://doi.org/10.1108/jocm-03-2017-0044

Bautista, J. (2019). Filipino Nurses' Use of Smartphones in Clinical Settings. *Comput Inform Nurs, 37*(2), 80-89. doi:https://doi.org/10.1097/cin.0000000000000482

Bautista, J. R., Rosenthal, S., Lin, T. T., & Theng, Y. L. (2018). Predictors and outcomes of nurses' use of smartphones for work purposes. *Computer in Human Behavior, 84*, 360-374. doi:https://doi.org/10.1016/j.chb.2018.03.008

Bautista, J., Lin, T., & Theng, Y.-L. (2020). Influence of Organizational Issues on Nurse Administrators' Support to Staff Nurses' Use of Smartphones for Work Purposes in the Philippines: Focus Group Study. *JMIR Nursing, 3*(1).

Bautista, J., Rosenthal, S. T.-C., Lin, T., & Theng, Y. (2018). Psychometric evaluation of the Smartphone for Clinical Work Scale to measure nurses' use of smartphones for work purposes. *Journal of the American Medical Informatics Association, 25*(8), 1018–1025. doi:https://doi.org/10.1093/jamia/ocy044

Bello, D. M., & Armarego, J. (2017). A systematic approach to investigating how information security and privacy can be achieved in BYOD environments. *Information and Computer Security, 25*(4), 475-492. doi:https://doi.org/10.1108/ICS-03-2016-0025

Buettner, R. (2015). Towards a New Personal Information Technology Acceptance Model: Conceptualization and Empirical Evidence from a Bring Your Own Device Dataset. *Twenty-first Americas Conference on Information Systems .* Puerto Rico.

Burleson, J., Grover, V., Thatcher, J. B., & Sun, H. (2021). A Representation Theory Perspective on the Repurposing of Personal Technologies for Work-Related Tasks. *Journal of the Association for Information Systems, 22*(6), 1556-1589.

Caporarello, L., Magni, M., & Pennarola, F. (2015). When Teachers Support Students in Technology Mediated Learning. *Organizational Innovation and Change*, 161–177. doi:https://doi.org/10.1007/978-3-319-22921-8_13

Carter, M., & Petter, S. (2015). Leveraging Consumer Technologies: Exploring Determinants of Smartphone Use Behaviors in the Workplace. *48th Hawaii International Conference on System Sciences.* doi:https://doi.org/10.1109/hicss.2015.550

Castro-Leon, E. (2014). Consumerization in the IT service ecosystem. *IT Professional, 16*(5). doi:https://doi.org/10.1109/mitp.2014.66

Chen, H., Li, Y., Chen, L., & Yin, J. (2020). Understanding employees' adoption of the Bring-Your-Own-Device (BYOD): the roles of information security-related conflict and fatigue. *Journal of Enterprise Information Management, 34*(3). doi:https://doi.org/10.1108/jeim-10-2019-0318

Choudhary, P., Mital, M., Pani, A. K., Papa, A., & Vicentini, F. (2018). Impact of enterprise mobile system implementation on organizational ambidexterity mediated through BPM customizability. *Business Process Management Journal, 24*(5), 1235-1254. doi:https://doi.org/10.1108/bpmj-07-2017-0209

Dang-Pham, D., Pittayachawan, S., Bruno, V., & Kautz, K. (2019). Investigating the diffusion of IT consumerization in the workplace: A case study using social network analysis,. *Information Systems Frontiers, 21*(4), 941-955. doi:https://doi.org/10.1007/s10796-017-9796-5

Degirmenci, K., Breitner, M., Nolte, F., & Passlick, J. (2023). Legal and Privacy Concerns of BYOD Adoption. Journal of Computer Information Systems. *Journal of Computer Information Systems.* doi:https://doi.org/10.1080/08874417.2023.2259346

Degirmenci, K., Shim, J., Breitner, M. H., Nolte, F., & Passlick, J. (2019). Future of Flexible Work in the Digital Age: Bring Your Own Device Challenges of Privacy Protection. *Fortieth International Conference on Information Systems.* Munich.

Dernbecher, S., Beck, R., & Weber, S. (2013). Switch to Your Own to Work with the Known: An Empirical Study on Consumerization of IT. *Proceedings of the Nineteenth Americas Conference on Information Systems.* Chicago, Illinois.

Doargajudhur, M. S., & Hosanoo, Z. (2023). The mobile technological era: insights into the consequences of constant connectivity of personal devices by knowledge workers. *Information Technology & People,, 36*(2), 701-733. doi:https://doi.org/10.1108/ITP-08-2021-0593

Doargajudhur, M., & Dell, P. (2018). Impact of BYOD on organizational commitment: an empirical investigation. *Information Technology & People, 32*(2). doi: https://doi.org/10.1108/itp-11-2017-0378

Garcıa-Mireles, G. A., Moraga, A., Garcıa, F., Calero, C., & Piattini, M. (2017). Interactions between environmental sustainability goals and software product quality: a mapping study . *Information and Software Technology.*

Gaß, O., Mädche, A., Biegel, H., & Li, M. (2013). Designing an Artifact for the Integration of Ubiquitous Information Systems in an Enterprise Context. *International Conference on Design Science Research in Information Systems DESRIST 2013: Design Science at the Intersection of Physical and Virtual Design*, (pp. 18-33). doi:https://doi.org/10.1007/978-3-642-38827-9_2

Gaß, O., Ortbach, K., Kretzer, M., Maedche, A., & Niehaves, B. (2015). Conceptualizing Individualization in Information Systems – A Literature Review. *Communications of the Association for Information Systems, 37*(3), 64-88. doi: https://doi.org/10.17705/1CAIS.03703

Gewald, H., Wang, X., Weeger, A., Raisinghani, M. s., Grant, G., & Sanchez, O. P. (2017). Millennials' attitudes toward IT consumerization in the workplace. *Communication of the ACM, 60*(10), 62-69. doi:https://doi.org/10.1145/3132745

Godefroid, M., Plattfaut, R., & Niehaves, B. (2021). IT Outside of the IT Department: Reviewing Lightweight IT in Times of Shadow IT and IT Consumerization. *16th International Conference on Business and Information Systems Engineering (WI).*

Gregory, R. W., Kaganer, E., Henfridsson, O., & Ruch, T. J. (2018). IT Consumerization and the transformation of IT governance,. *MIS Quarterly, 42*(4), 1225-1253. doi:https://doi.org/10.25300/MISQ/2018/13703

Guo, X., & Reithel, B. (2020). Information-Processing Support Index: A New Perspective on IT Usage. .*Journal of Computer Information Systems, 60*(6), 541-554. doi:https://doi.org/10.1080/08874417.2018.1550732

Haag, S., & Eckhardt, A. (2017). Shadow IT. *Business & Information Systems Engineering, 59*(6), 1-5. doi:https://doi.org/10.1007/s12599-017-0497-x

Harris, J., Ives, B., & Junglas, I. (2012). IT Consumerization: When Gadgets Turn Into Enterprise IT Tools. *MIS Quarterly Executive, 11*(3), 99-112.

Hedman, M. B., Gimpel, G., & Damsgaard, J. (2018). Translating evolving technology use into user stories: Technology life narratives of consumer technology use. *Information System Journal.*

Hu, L. Z., Xin, (. L., Sumeet, G., & Xiuhong, H. (2021). Trialing or combining? Understanding consumer partial switching in mobile application usage from the variety seeking perspective. *Internet Research: Electronic Networking Applications and Policy., 31*(5), 1769-1802. doi:https://doi.org/10.1108/INTR-09-2019-0368

Ivanov, I. (2014). BYOD: The next wave of consumerization of IT the impact of byod on the enterprise IT landscape. *roceedings of the Fourth International Symposium on Business Modeling and Software Design (BMSD 2014)*, (pp. 245-251). doi: https://doi.org/10.5220/0005426702450251

Ivanov, I. (2016). Exploring Business - IT Nexus: Make the Most of IT-Enabled Capabilities. *International Symposium on Business Modeling and Software Design.* doi:https://doi.org/10.1007/978-3-319-40512-4_9

Jarrahi, M. H., Crowston, K., Bondar, K., & Katzy, B. (2017). A pragmatic approach to managing enterprise IT infrastructures in the era of consumerization and individualization of IT. *International Journal of Information Management, 37*(6), 566-575. doi:https://doi.org/10.1016/j.ijinfomgt.2017.05.016

Jovanovikj, V., Gabrijelčič, D., & Klobučar, T. (2014). A conceptual model of security context. *International Journal of Information Security.* doi:https://doi.org/10.1007/s10207-014-0229-x

Jovanovikj, V., Gabrijelčič, D., & Klobučar, T. (2017). Security policy model for ubiquitous social systems. *Modeling and Using Context*, 302-314. doi:https://doi.org/10.1007/978-3-319-57837-8_24

Junglas, I., Goel, L., Ives, B., & Harris, J. (2014). Consumer IT at Work: Development and Test of an IT Empowerment Model. *Thirty Fifth International Conference on Information Systems.* Auckland.

Junglas, I., Goel, L., Ives, B., & Harris, J. (2019). Innovation at work: The relative advantage of using consumer it in the workplace. *Information Systems Journal, 29*(2), 317-339. doi:https://doi.org/10.1111/isj.12198

Junglas, I., Goel, L., Rehm, S.-V., & Ives, B. (2022). On the benefits of consumer IT in the workplace - An IT empowerment perspective. *International Journal of Information Management, 64*. doi:https://doi.org/10.1016/j.ijinfomgt.2022.102478

Kadimo, K., A., M., & Kebaetse, M. (2022). Understanding the role of the bring-your-own-device policy in medical education and healthcare delivery at the University of Botswana's Faculty of Medicine. *Information and Learning Sciences, 123*(3/4), 199-213. doi:https://doi.org/10.1108/ILS-09-2021-0077

Kaganer, E., Gregory, R., & Sarker, S. (2023). A Process for Managing Digital Transformation: An Organizational Inertia Perspective. *Journal of the Association for Information Systems, 24*(4), 1005-1030. doi:https://doi.org/10.17705/1jais.00819

Kitchenham, B. A., Budgen, D., & Brereton, O. P. (2011). Using mapping studies as the basis for further research – A participant-observer case study . *Information and Software Technology, 53*, 638–651.

Klesel, M., Kampling, H., Bretschneider, U., & Niehaves, B. (2018). Does the Ability to Choose Matter? On the Relationship between Bring-your-own Behavior and IT Satisfaction,. *Communications of the Association for Information Systems:, 43*. doi:ttps://doi.org/10.17705/1CAIS.04336

Koch, H., Yan, J., & Curry, P. (2019). Consumerization-conflict resolution and changing IT-user relationships. *Information Technology & People, 33*(1), 251-271. doi:https://doi.org/10.1108/itp-11-2017-0411

Koch, H., Yan, J., Zhang, S., Milic, N., & Curry, P. (2019). How Consumer Technology Is Changing the IT Function: A Multi-Case Study of Three Fortune 500 Companies. *Information Systems Management, 36*(4). doi:https://doi.org/10.1080/10580530.2019.1652443

Koch, H., Zhang, S., Giddens, L., Milic, N., Yan, K., & Curry, L. C. (2014). Consumerization and IT Department Conflict. *Thirty Fifth International Conference on Information Systems.* Auckland .

Koffer, S., Fielt, E., & Niehaves, B. (2015). IT consumerization and its effects on IT business value, IT capabilities, and the IT function. *Proceedings of the 19th Pacific Asia Conference on Information Systems (PACIS).* (pp. 1-16). Association for Information Systems (AIS).

Koffer, S., Junglas, I., Chiperi, C., & Niehaves, B. (2014). Dual use of mobile IT and work-to-life conflict in the context of IT consumerization. *ICIS 2014 Proceedings .*

Koffer, S., Ortbach, K. C., & Niehaves, B. (2014). Exploring the Relationship between IT Consumerization and Job Performance: A Theoretical Framework for Future Research. *Communications of the Association for Information Systems, 35*. doi:https://doi.org/10.17705/1CAIS.03514

Koffer, S., Ortbach, K., Junglas, I., Niehaves, B., & Harri, J. (2015). Innovation Through BYOD? The Influence of IT Consumerization on Individual IT Innovation Behavior. *Business Information System Eng., 57*(6), 363-375. doi:https://doi.org/10.1007/s12599-015-0387-z

Kopper, A., Westner, M., & Strahringer, S. (2020). rom Shadow IT to Business-managed IT: a qualitative comparative analysis to determine configurations for successful management of IT by business entities. *Information Systems and e-Business Management, 18*, 209–257. doi: https://doi.org/10.1007/s10257-020-00472-6

Kravets, A., Bui, N., & Al-Ashval, M. (2014). Mobile Security Solution for Enterprise Network. *Joint Conference on Knowledge-Based Software Engineering JCKBSE 2014: Knowledge-Based Software Engineering*, (pp. 371–382). doi:https://doi.org/10.1007/978-3-319-11854-3_31

Lanzl, J., Schoch, M., & Gimpel, H. (2023). Issues regarding IT Consumerization: How Mixed IT Portfolios of Private and Business IT Components Cause Unreliability. *Australasian Journal of Information Systems*. doi:https://doi.org/10.3127/ajis.v27i0.4121

Lanzl, J., Utz, L., Afflerbach, P., & Gimpel, H. (2023). Conceptualizing the Integration of Business and Private Components in Individual Information Systems. *Journal of Business Research*. doi:https://doi.org/10.1007/s41471-023-00176-w

Larson, B., & Cegielski, C. (2015). Assessment of Business Analytics Trust Through Examination of Personal IT Use. *International Conference on Human-Computer Interaction.* doi: https://doi.org/10.1007/978-3-319-21383-5_25

Law, W. (2012). Consumerization of IT- Challenges for IS education. *Computer Science.*

Leclercq - Vandelannoitte, A. (2015). Managing BYOD: how do organizations incorporate user-driven IT innovations? *Information Technology & People, 28*(1), 2-33. doi:https://doi.org/10.1108/ITP-11-2012-0129

Leclercq-Vandelannoitte, A. (2015). Leaving employees to their own devices: new practices in the workplace. *Journal of Busienss Strategy*. doi:https://doi.org/10.1108/jbs-08-2014-0100

Loose, M., Weeger, A., & Gewald, H. (2013). BYOD – The Next Big Thing in Recruiting? Examining the Determinants of BYOD Service Adoption Behavior from the Perspective of Future Employees. *Proceedings of the Nineteenth Americas Conference on Information Systems.* Chicago, Illinois.

Luker, N., Winkler, T., & Kude, T. (2016). IT consumerization and compliant use: Do policies matter? *2016 PACIS Proceedings.*

Madden, B. (2023, 8 15). The Consumerization of IT roars back, and this time they have AI! Retrieved 01 22, 2024, from https://www.linkedin.com/pulse/consumerization-roars-back-time-have-ai-brian-madden

Mallmann, G. L., Maçada, A. C., & Oliveira, M. (2018). The influence of shadow IT usage on knowledge sharing: An exploratory study with IT users. *Busienss Information Review, 35*(1). doi: https://doi.org/10.1177/0266382118760143

Mallmann, G. L., Pinto, A. V., & Maçada, A. C. (2019). Shedding Light on Shadow IT: Definition, Related Concepts, and Consequences. *Information Systems for Industry 4.0*, 63-79. doi:https://doi.org/10.1007/978-3-030-14850-8_5

Mar, K., Law, C., & Chin, V. (2015). Secure Personal Cloud Storage. *10th International Conference for Internet Technology and Secured Transactions (ICITST).* doi:https://doi.org/10.1109/icitst.2015.7412068

Marshall, S. (2014). IT Consumerization: A Case Study of BYOD in a Healthcare Setting. *Technology Innovation Management Review.* doi:https://doi.org/10.22215/timreview/771

Meske, C., Stieglitz, S., Brockmann, T., & Ross, B. (2017). Impact of Mobile IT Consumerization on Organizations –An Empirical Study on the Adoption of BYOD Practices. *HCIBGO 2017*, (pp. 349-363). doi:https://doi.org/10.1007/978-3-319-58484-3_27

Mokosch, G., & Klesel, M. N. (2015). Putting flesh on the duality of structure: The case of IT consumerization. *American Conference on Information Systems.* Puerto Rico.

Mooney, J. L., Parham, A. G., & Cairney, T. D. (2015). Your Guide to Authenticating Mobile Devices. *Journal of Corporate Accounting & Finance*. doi:https://doi.org/10.1002/jcaf.22052

Moschella, D., Neal, D., Opperman, P., & Taylor, j. (2004). *The 'Consumerization' of Information Technology.* CSC'S RESEARCH & ADVISORY SERVICES.

Mueller, M., Klesel, M., Heger, O., & Niehaves, B. (2016). Empirical insights on individual innovation behaviour: A qualitative study on IT-consumerization. *PACIS 2016 Proceedings.*

Nguyen, T. (2023). Understanding Shadow IT usage intention: a view of the dual-factor model. *Online Information Review*. doi:https://doi.org/10.1108/oir-04-2022-0243

Niehaves, B., Köffer, S., & Ortbach, K. (2012). IT Consumerization – A Theory and Practice review. *AMCIS 2012 Proceedings*, *18.*

Niehaves, B., Köffer, S., & Ortbach, K. (2013). IT consumerization under more difficult conditions - Insights from German local governments. *Proceedings of the 14th Annual International Conference on Digital Government Research June 2013*, (pp. 205–213). doi:https://doi.org/10.1145/2479724.2479754

Niehaves, B., Köffer, S., Ortbach, K., & Reimler, S. (2013). Boon and Bane of IT Consumerization: The Burnout-Engagement-Continuum. *Proceedings of the Nineteenth Americas Conference on Information Systems, Chicago, Illinois, August 15-17.*

Nithithanatchinnapat, B., & Joshi, K. (2014). Knowledge Management and Consumerization of Information Technology: Opportunities and Challenges. *SIGSIM-CPR '14: Proceedings of the 52nd ACM conference on Computers and people research May 2014,* (pp. 49–53). doi:https://doi.org/10.1145/2599990.2600001

Olalere, M., Abdullah, M. T., Mahmod, R., & Abdullah, A. (2015). A Review of Bring Your Own Device on Security Issues. *SAGE Open.* doi:https://doi.org/10.1177/2158244015580372

Oluranti, J., & Misra, S. (2016). Policy framework for adoption of bring your own device (BYOD) by institutions in Nigeria. *Journal of Information Technology Review, 7*(1).

Ophoff, J., & Miller, S. (2019). Business priorities driving BYOD adoption: A case study of a South African financial services organization. *Information Science + Information Technology, 16*, 165-196. doi:https://doi.org/10.28945/4303

Ortbach. (2015). Unraveling the Effect of Personal Innovativeness on Bring-Your-Own-Device (BYOD) Intention – The Role of Perceptions Towards Enterprise-Provided and Privately-Owned Technologies. *ECIS 2015.*

Ortbach, K., Bode, M., & Niehaves, B. (2013). What Influences Technological Individualization? – An Analysis of Antecedents to IT Consumerization Behavior. *Proceedings of the Nineteenth Americas Conference on Information Systems,.* Chicago, Illinois.

Ortbach, K., Brockmann, T., & Stieglitz, S. (2014). DRIVERS FOR THE ADOPTION OF MOBILE DEVICE MANAGEMENT IN ORGANIZATIONS. *Proceedings of the European Conference on Information Systems (ECIS).* Tel AViv, Izrael.

Ortbach, K., Köffer, S., Bode, M., & Niehaves, B. (2013). Individualization of Information Systems - Analyzing Antecedents of IT Consumerization Behavior. *International Conference on Information Systems (ICIS 2013).* Mailand, Italien.

Ortbach, K., Köffer, S., Müller, C., & Niehaves, B. (2013). How IT consumerization affects the stress level at work: A public sector case study. *PACIS 2013 Proceedings.*

Ostermann, U., & Wiewiorra, L. (2017). Raising the Bar The Effect of New and More Appealing Alternatives on User Satisfaction with Incumbent Information Systems. *Pacific Asia Conference on Information Systems.*

Ostermann, U., Holten, R., & Franzmann, D. (2020). The Influence of Private Alternatives on Employees' Acceptance of Organizational IS. *Communications of the Association for Information Systems*, *47.* doi:https://doi.org/10.17705/1CAIS.04735

Palanisamy, & Yang, W. (2021). Users' attitude on perceived security of enterprise systems mobility: an empirical study. *Information and Computer Security.* doi: https://doi.org/10.1108/ics-05-2020-0069

Pani, A., Choudhary, P., Routray, S., & Pani, M. (2020). Effects of MDM Adoption on Employee in the Context of Consumerization of IT. *International Working Conference on Transfer and Diffusion of IT (TDIT), Dec 2020*, (pp. 59-69). Tiruchirappalli, India.

Petersen, K., Feldt, R., Mujtaba, S., & Mattsson, M. (2008). Systematic Mapping Studies in Software Engineering. *12th International Conference on Evaluation and Assessment in Software Engineering (EASE).*

Petersen, K., Vakkalanka, S., & Ludwik, K. (2015). Petersen, Kai; Vakkalanka, Sairam; Kuzniarz Ludwik; 2015. Guidelines for conducting systematic mapping studies in software engineering: An update. *Information and Software Technology, 64*, 1-18.

Petrović, M., & Sakal, M. (2024). Consumerization of IT - intersection of development streams of business and personal IT. *Strategic Management.* doi:10.5937/StraMan2400002P

Qi, C., Cai, Y., & Xu, T. (2021). The Sustainability of Enterprise Mobility in Pandemic – Do Usage Location, Device Type and Device Ownership Matter? *Australasian Conference on Information Systems 2021 - Sydney, Australia.* Retrieved from https://aisel.aisnet.org/acis2021/

Rios-Aguilar, S., & LLorens-Montes, F. (2017). Location Aware Information System for Non-intrusive Control of Remote Workforce with the Support of Business IT Consumerization. *Proceedings of the 19th International Conference on Enterprise Information Systems (ICEIS 2017), 2*, pp. 442-448. doi:https://doi.org/10.5220/0006336704420448

Ruch, T. J., & Gregory, R. W. (2014). CONSUMERIZATION OF IT – WHERE IS THE THEORY? *PACIS 2014 Proceedings*, *139.*

Rudly, R. (2022, 11 4). The Consumerization of Information. Retrieved 1 22, 2024, from https://www.greenbook.org/insights/executive-insights/the-consumerization-of-information

Sakal, M., Rakovic, L., Seres, L., & Vukovic, V. (2019). Embracing the Consumerization of IT – Business informatics curriculum (re)design. *EDULEARN19 Proceedings - 11th International Conference on Education and New Learning Technologies.* doi:https://doi.org/10.21125/edulearn.2019.2417

Salama, M., Bahsoon, R., & Bencomo, N. (2017). CHAPTER: MANAGING TRADE-OFFS IN SELF-ADAPTIVE SOFTWARE ARCHITECTURES: A SYSTEMATIC MAPPING STUDY. Elsevier.

Samarathunge, R., Perera, W., Ranasinghe, R., Kahaduwa, K., Senarathne, A., & Abeywardena, K. (2018). Intelligent Enterprise Security Enhanced COPE (Intelligent ESECOPE). *IEEE International Conference on Information and Automation for Sustainability (ICIAfS)*. doi:https://doi.org/10.1109/iciafs.2018.8913361

Sánchez, C. B., Díaz Redondo, R. P., Fernández Vilas, A., & Sánchez Bermúdez, A. M. (2018). Spectrophotometers for labs: A cost-efficient solution based on smartphones. *Computer Application for Engineering Education, 27*(2), 371-379 . doi:https://doi.org/10.1002/cae.22081

Sangroha, D. G. (2014). Exploring Security Theory Approach in BYOD Environment. *Advanced Computing, Networking and Informatics, 2*, 259–266. doi:https://doi.org/10.1007/978-3-319-07350-7_29

Schalow, P. R., Winkler, T. J., Repschlaeger, J., & Zarnekow, R. (2013). The Blurring Boundaries Of Work-Related And Personal Media Use: A Grounded Theory Study On The Employee's Perspective. *Proceedings of the 21st European Conference on Information Systems ECIS 2013 Completed Research.* Retrieved from https://aisel.aisnet.org/ecis2013_cr/212

Seth, F. P., Taipale, O., & Smolander, K. (2014). Role of Software Product Customer in the Bring Your Own Device (BYOD) Trend: Empirical Observations on Software Quality Construction. *International Conference on Product-Focused Software Process Improvement PROFES 2014: Product-Focused Software Process Improvement*, (pp. 194–208). doi:https://doi.org/10.1007/978-3-319-13835-0_14

Shadbad, D., & Biros, F. (2020). Technostress and its influence on employee information security policy compliance. *Information Technology & People, 1*, 119-141. doi:https://doi.org/10.1108/itp-09-2020-0610

Slongo, L. A., Blanck, M., Brinkhues, R. A., & Oliveira, R. M. (2015). Feature Fatigue, IT Fashion and IT Consumerization - Is There a Relationship? *Journal of Technology Management & Innovation, 10*(4), 64-73. doi:https://doi.org/10.4067/s0718-27242015000400007

Smith, W. (2017). Can we borrow your phone? Employee privacy in the BYOD era. *Journal of Information, Communication and Ethics in Society, 15*(4), 397-411. doi:https://doi.org/10.1108/jices-09-2015-0027

Song, Q., Wang, Y., Chen, Y., Benitez, H., & Hu, J. (2019). Impact of the usage of social media in the workplace on team and employee performance. *Information & Management, 56*(8). doi:https://doi.org/10.1016/j.im.2019.04.003

Stephens, K. K., & Ford, J. L. (2015). Unintended consequences of a strategically ambiguous organizational policy selectively restricting mobile device use at work. *Mobile Media & Communication*. doi:https://doi.org/10.1177/2050157915619211

Thambusamy, R., & Palvia, P. (2020). U.S. Healthcare Provider Capabilities and Performance: the Mediating Roles of Service Innovation and Quality. *Information Systems Frontiers, 22*(1), 91-111. doi:https://doi.org/10.1007/s10796-018-9841-z

Vignesh, U., & Asha, S. (2015). Modifying security policies towards BYOD. *Procedia Computer Science, 50*, 511-516. doi:https://doi.org/10.1016/j.procs.2015.04.023

Walterbusch, W., Fietz, A., & Teuteberg, F. (2017). Missing Cloud Security Awareness: Investigating Risk Exposure in Shadow IT. *Journal of Enterprise Information Management, 30*(4). doi:https://doi.org/10.1108/jeim-07-2015-0066

Wang, X., Weeger, A., & Gewald, H. (2017). Factors driving employee participation in corporate BYOD programs: A cross-national comparison from the perspective of future employees. *Australasian Journal of Information System, 21*. doi: https://doi.org/10.3127/ajis.v21i0.1488

Watts-Englert, J., Szymanski, M., Wall, P., Sprague, M. A., & Dalal, B. (2013). Back to the Future of Work: Informing corporate renewal. *Ethnographic Praxis in Industry Conference Proceedings, 1.* doi:https://doi.org/10.1111/j.1559-8918.2012.00017.x

Weeger, A., & Gewald, H. (2014). Factors influencing future employees' decision-making to participate in a BYOD program: does risk matter? *Twenty Second European Conference on Information Systems.* Tel Aviv.

Weeger, A., Wang, X., & Gewald, H. (2015). IT Consumerization: Byod-Program Acceptance and its Impact on Employer Attractiveness. *Journal of Computer Information Systems, 56*(1), 1-10. doi:https://doi.org/10.1080/08874417.2015.11645795

Weeger, A., Wang, X., Gewald, H., Raisinghani, M., Sanchez, O., & Grant, G. (2020). Determinants of Intention to Participate in Corporate BYOD-Programs: The Case of Digital Natives. *Information Systems Frontiers, 22*, 203-219. doi:https://doi.org/10.5465/ambpp.2015.11188abstract

Weiß, F., & Leimeister, J. M. (2014). Why can't I use my iPhone at work?: managing consumerization of IT at a multi-national organization. *Journal of Information Technology Teaching Cases*. doi: https://doi.org/10.1057/jittc.2013.3

Welck, M., Jensen, T., Trenz, M., & Veit, D. (2018). Empowerment and BYOx: Towards Improved IS Security Compliance . *Conference: 38th International Conference on Information Systems (ICIS).* Seoul, South Korea.

Welck, M., Jensen, T., Trenz, M., & Veit, D. (n.d.). IT-Consumerization: Domain control, (reversed) presenteeism, and stress. . *Thirty Ninth International Conference on Information Systems*, (p. 2018). San Francisco.

Wenzel, S. (2014). App store models for enterprise software: A comparative case study of public versus internal enterprise app stores. *Software Business. Towards Continuous Value Delivery*. doi:https://doi.org/10.1007/978-3-319-08738-2_16

Yan, J. (., Zhang, s., Milic, N., Koch, H., & Curry, P. (2016). IT Consumerization and New IT Practices: Discriminating, Firefighting and Innovating. *AMCIS 2016 Proceedings. 5.* doi:https://doi.org/10.1108/itp-11-2017-0411

Yevseyeva, I., Morisset, C., Groß, T., & Moorsel, A. v. (2014). A Decision Making Model of Influencing Behavior in Information Security. *European Workshop on Performance Engineering EPEW 2014: Computer Performance Engineering*, (pp. 194–208). doi:https://doi.org/10.1007/978-3-319-10885-8_14

Yevseyeva, I., Turland, J., Morisset, C., & Coventry, L. (2015). Addressing consumerization of IT risks with nudging. *International Journal of Information Systems and Project Management, 3*(3). doi:https://doi.org/10.12821/ijispm030301

Yin, P., Ou, C. X., Davison, R. M., & Wu, J. (2018). Coping with mobile technology overload in the workplace. *Internet Research, 28*(5), 1189-1212. doi:https://doi.org/10.1108/IntR-01-2017-0016

Yin, P., Wang, C., & Liang, L. (2023). Consumer information technology use in the post-pandemic workplace: a post-acceptance adaptation perspective. *Information Technology & People, 36*(4), 1484-1508. doi:https://doi.org/10.1108/ITP-09-2020-0657

Zaza, I., & Armstrong, D. (2018). A Look on the Generational Differences in IT Self-Service Engagement Emergent Research Forum (ERF) . *AMCIS 2018 Proceedings.*

Zhang, L., Mouritsen, M., & Miller, J. (2019). Role of Perceived Value in Acceptance of "Bring Your Own Device" Policy. *Journal of Organizational and End User Computing, 31*(2), 65-82. doi:https://doi.org/10.4018/joeuc.2019040104

Zheng, Y., Cao, Y., & Chang, C.-H. (2019). UDhashing: Physical unclonable function-based user-device hash for endpoint authentication. *IEEE Transactions on Industrial Electronics, 66*(12), 9559-9570. doi:https://doi.org/10.1109/tie.2019.2893831