



UNIVERSITI  
TEKNOLOGI  
MARA

Cawangan Perlis  
Kampus Arau

# E-BOOK COMPILATION OF

## Unveiling the Nexus of Complex Challenges in Accounting, Finance and Management

**REKTOR**

PROF.MADYA TS. DR. SHUKOR SANIM BIN MOHD FAUZI

**PENAUNG**

PROF.MADYA DR. AZRUL BIN ABDULLAH C.A.(M)

**KETUA EDITOR**

DR. MARJAN BINTI MOHD NOOR C.A.(M)

**EDITOR PENGURUSAN**

PUAN AZURA BT MOHD NOOR

**EDITOR**

PUAN NORIZAM AHMAD @ MUHAMMAD

**PEREKA GRAFIK**

DR. MARJAN BINTI MOHD NOOR & PUAN FA'IZAH GHAZI C.A.(M)

**EDISI 01  
OKTOBER  
2023**



[www.facebook.com/FacPerlis](https://www.facebook.com/FacPerlis)



[facperlis@gmail.com](mailto:facperlis@gmail.com)



[facperlis.blogspot.com](https://facperlis.blogspot.com)

**JAWATANKUASA PENERBITAN, PENYELIDIKAN & INOVASI  
FAKULTI PERAKAUNAN, UiTM CAWANGAN PERLIS**

**HALAMAN JUDUL**

# **E-BOOK**

**COMPILATION OF  
UNVEILING THE NEXUS OF COMPLEX  
CHALLENGES IN ACCOUNTING, FINANCE AND  
MANAGEMENT**

**JAWATANKUASA PENERBITAN, PENYELIDIKAN & INOVASI  
FAKULTI PERAKAUNAN  
UiTM CAWANGAN PERLIS  
KAMPUS ARAU  
02600 ARAU, PERLIS**

## HALAMAN HAK CIPTA

Hak Cipta Terpelihara © 2023. Tidak dibenarkan mengeluarkan mana-mana bahagian artikel, ilustrasi dan isi kandungan e-book ini dalam apa jua bentuk dan dengan cara apa sekalipun sama ada secara elektronik, fotokopi, mekanik, rakaman, atau cara lain sebelum mendapat izin bertulis daripada Pengarah bagi Jawatankuasa Penerbitan, Penyelidikan dan Inovasi, Fakulti Perakaunan, UiTM Cawangan Perlis, Kampus Arau, 02600 Arau, Perlis.

Hak Cipta © 2023

Diterbitkan oleh:

Fakulti Perakaunan

UiTM Cawangan Perlis

Kampus Arau

02600 Arau

Perlis, MALAYSIA.

Tel: 04-988 2766

Email: [marjan@uitm.edu.my](mailto:marjan@uitm.edu.my)

[synergyresearchfac@gmail.com](mailto:synergyresearchfac@gmail.com)

e ISBN 978-629-98714-0-8



# PERUTUSAN REKTOR

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**Assalamualaikum wbt dan Salam Sejahtera semua**

Pada kesempatan ini, saya ingin mengucapkan syabas dan tahniah kepada para pensyarah Fakulti Perakaunan UiTM Cawangan Perlis amnya dan pasukan Sidang Redaksi 'E-Book Compilation of Unveiling the Nexus of Complex Challenges in Accounting, Finance, and Management (2023)' khasnya kerana berjaya menerbitkan E-Book buat pertama kalinya. Sesungguhnya, penerbitan E-Book ini mencerminkan kesungguhan Fakulti Perakaunan dalam menggembeleng tenaga untuk menggalakkan budaya penulisan dan menjayakan budaya kerja sepasukan.

Usaha murni ini merupakan satu saluran kepada pensyarah khasnya untuk menghasilkan penulisan ilmiah dan yang bercorak santai. Peluang seperti ini bukan sahaja dapat memperkembangkan profesionalisme, malah menghasilkan pensyarah yang mampu memberi sumbangan dalam bidang penulisan ilmiah dan kreatif.

Sumbangan daripada pelbagai pihak akan dapat menyuburkan lagi budaya menulis. Matlamat ini selaras dengan tuntutan dan keperluan universiti yang mewajibkan pensyarah untuk menghasilkan penulisan dan penerbitan.

Diharapkan E-Book ini, dapat menjadi platform untuk berkongsi ilmu, pengalaman dan kepakaran kepada warga Fakulti Perakaunan dan UiTM Perlis keseluruhannya dan juga komuniti luar. Semoga usaha murni ini memberi manfaat kepada semua pembaca.

Sekian, terima kasih.

**PROF. Madya TS. DR. SHUKOR SANIM BIN MOHD FAUZI**

Rektor

UiTM Cawangan Perlis





# KATA-KATA ALUAN

## KETUA PUSAT PENGAJIAN

### FAKULTI PERAKAUNAN, UITM CAWANGAN PERLIS

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamualaikum wbt dan Salam Sejahtera semua

Terlebih dahulu, saya merakamkan ucapan terima kasih kepada Sidang Redaksi kerana memberi kesempatan untuk saya mencoretkan sepatah dua kata dalam E-book edisi pertama ini.

Syabas dan tahniah kepada semua pihak yang terlibat didalam penerbitan 'E-Book Compilation of Unveiling the Nexus of Complex Challenges in Accounting, Finance, and Management (2023)' ini khususnya kepada warga pasukan Sidang Redaksi yang merupakan nadi penggerak atas berkat usaha yang tidak mengenal erti jemu dan penat dalam menyiapkan edisi sulung E-book yang cukup bermakna bagi seluruh warga Fakulti Perakaunan UiTM Cawangan Perlis. Tidak mudah untuk menghasilkannya tanpa usaha yang kolektif, komitmen, kerjasama dan rasa tanggungjawab. Secara peribadinya, saya sangat berbangga dengan kejayaan menerbitkan E-book ini.

E-book ini merupakan gabungan hasil tulisan para pensyarah Fakulti Perakaunan dan merupakan satu wadah perkongsian ilmu terkini di dalam pelbagai bidang terutamanya dalam bidang perakaunan, kewangan dan pengurusan. Semoga perkongsian ini bermanfaat dan berinformasi kepada pembaca. Saya berharap pada terbitan yang akan datang, lebih ramai lagi yang berminat untuk menyumbang hasil penulisan untuk dikongsikan.

Akhir kata, saya mewakili warga Fakulti Perakaunan menjemput anda menerokai E-book ini yang boleh dijadikan rujukan dan mendapatkan informasi. Tinggi harapan saya agar Fakulti Perakaunan UiTM cawangan Perlis terus cemerlang di dalam menghasilkan penulisan ilmiah seperti ini.

Sekian, Wassalam.

**PROF. MADYA DR. AZRUL BIN ABDULLAH C.A. (M)**

Ketua Pusat Pengajian  
Fakulti Perakaunan  
UiTM Cawangan Perlis



# KATA-KATA ALUAN KETUA EDITOR

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamualaikum wbt dan Salam Sejahtera semua

Puji dan syukur dipanjatkan ke hadirat Allah SWT, atas segala nikmat dan hidayah yang diberikan. Hanya dengan izinNya 'E-Book Compilation of Unveiling the Nexus of Complex Challenges in Accounting, Finance, and Management (2023)' edisi sulung ini dapat diterbitkan. Terima kasih tidak terhingga kepada semua pihak yang terlibat dalam menjayakan E-Book ini khususnya kepada warga pasukan Sidang Redaksi dan juga Ketua Pusat Pengajian Fakulti Perakaunan UiTM Perlis yang tidak jemu memberi cadangan, idea dan sokongan dan juga buat warga pasukan Sidang Redaksi.

Terima kasih tidak terhingga khususnya kepada Ketua Pusat Pengajian Fakulti Perakaunan UiTM Perlis yang tidak jemu memberi cadangan, idea dan sokongan dalam menjayakan E-Book ini. Ucapan terima kasih juga ditujukan kepada semua pihak yang terlibat, khususnya warga pasukan Sidang Redaksi, Jawatankuasa Penerbitan, Penyelidikan dan Inovasi Fakulti Perakaunan UiTM Cawangan Perlis yang sentiasa memberi sokongan dan kerjasama yang tidak berbelah bahagi dalam usaha penerbitan E-Book ini.

Pada penerbitan edisi pertama ini, kami menerbitkan 17 buah penulisan ilmiah dalam pelbagai bidang. Artikel yang diterbitkan ini adalah hasil sumbangan daripada para pensyarah Fakulti Perakaunan UiTM Cawangan Perlis dan juga penglibatan daripada warga Universitas Sumatera Utara. Sumbangan dari semua pihak sangatlah dialu-alukan pada edisi akan datang. Kami berharap E -book ini dapat menjadi medium untuk menyerahkan dan mengasah bakat menulis bukan sahaja terhad dalam bidang perakaunan, malahan penulisan dalam bidang yang lain juga.

Akhir kalam, saya menyusun sepuluh jari memohon kemaafan seandainya ada kekhilafan yang dilakukan sepanjang proses penerbitan 'E-Book Compilation of Unveiling the Nexus of Complex Challenges in Accounting, Finance, and Management (2023)' ini. Harapan saya agar tahun-tahun seterusnya seluruh warga Fakulti Perakaunan akan lebih bersemangat dan komited bagi memantapkan lagi E-Book ini. Sesungguhnya segala yang baik datangnya dari Allah SWT dan kekurangannya dari pihak kami sendiri.

Sekian, wassalam.

**DR. MARJAN BINTI MOHD NOOR C.A. (M)**

Ketua Editor

- Fakulti Perakaunan
- UiTM Cawangan Perlis



# ISI KANDUNGAN

## Artikel

## Mukasurat

<i>Perutusan Rektor</i> .....	ii
<i>Kata-Kata Aluan Ketua Pusat Pengajian</i> .....	iii
<i>Kata-Kata Aluan Ketua Editor</i> .....	iv
<i>Plethora of Benefits on Cloud Accounting Services</i> .....	1-3
<i>Navigating the Uncharted Waters: The Complexities and Challenges of Auditing Cryptocurrency</i> .....	4-6
<i>The TikTok Takeover: The Unbelievable Journey of the World's Most Addictive App</i> .....	7-9
<i>Kelebihan Keusahawanan Siswa di Era Digital</i> .....	10-13
<i>A Brief Introduction to Collaborative Learning</i> .....	14-17
<i>The Tech-Accountant: Harnessing Technological Prowess in the Accounting Profession</i> .....	18-21
<i>Artificial Intelligence (AI) vs Human Accountant</i> .....	22-25
<i>Unveiling the Perils and Catastrophic Vulnerabilities of Cyber Security Attacks in Accounting</i> .....	26-30
<i>Cultivating Global Awareness: Exploring the Benefits and Challenges of Global Learning</i> .....	31-34
<i>Balancing Dreams and Reality: Bridging the Gap between Parentals Aspirations and Children's Interests</i> .....	35-37
<i>Financial Ratio Analysis: Tools Used to Evaluate Financial Performance</i> .....	38-42
<i>Helping Hands: The Beauty of Peer Teaching</i> .....	43-46
<i>The Emergence of Environmental Accounting</i> .....	47-51
<i>Tax Compliance Dilemma Among TikTok Sellers in Malaysia</i> .....	52-55
<i>Implementation of E-Accounting Applications in Cloud Technology: An Accounting Process</i> .....	56-60
<i>Cloud-Based Accounting Intelligence Application: Opportunities and Challenges to Information System</i> .....	61-65
<i>Mobile Banking Implementation in Indonesia: The Perspective of Diffusion of Innovation in Accounting</i> .....	66-74

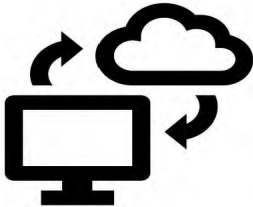
# PLETHORA OF BENEFITS ON CLOUD ACCOUNTING SERVICES

Nor Kartini Mohd Rodzi

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

*Corresponding author: norkartini@uitm.edu.my*

The world of accounting software is rapidly shifting towards cloud computing. The accounting software vendors have moved their products to the cloud and provide different forms of cloud accounting solutions. This integration of basic cloud computing principles and activities carried out by accounting software companies has led to the development and popularity of cloud accounting solutions. These solutions offer many benefits, including increased accessibility, scalability, and cost efficiency, making them an attractive option for many businesses (Motalo,



2023). Cloud accounting is an “online accounting service” that runs on the servers and accessibility is using the web browser, over the Internet and it serves the same function as accounting software installed on a computer (Sutthikun, Thapo & Sahayrak, 2018).

Small businesses may find traditional accounting software applications to be complex and expensive. These applications require significant storage capacity, internet bandwidth, and a specialized IT

staff to configure, install, and update the accounting software (Mihalache, 2011). This can be a major challenge for small businesses with limited resources and budgets. In contrast, cloud accounting solutions offer a simplified and cost-effective alternative that requires minimal IT resources and can be accessed from any location with an internet connection. This has led to cloud accounting solutions becoming increasingly popular with small businesses.

The cloud accounting market is experiencing a significant rise, as it continues to offer innovative solutions that should be seriously considered. According to Dimitriu and Matei (2014), cloud accounting solutions include Financial Force.com, NetSuite, Microsoft Office 365, FreshBooks, Liquid, QuickBooks Online, Myob, Xero, Aqilla, Mint.com or Waveaccounting, each of them ensuring specific or customized functionalities. Moreover, companies from all over the world would benefit from cloud accounting services as customers. Cloud accounting solutions offer users the ability to access their financial data from anywhere, at any time, and on any device, making them a great option for businesses with remote and distributed teams.





Cloud accounting services offer numerous benefits to accounting departments including provide real-time data, lower IT costs, better accesibility, scalability and provide data security (Imene & Imhanzenobe, 2020; Attaran & Woods, 2019; Khanom, 2017; Youssef, 2012 and Carroll, Van Der Merwe & Kotze, 2011). In a study by Imene and Imhanzenobe (2020), cloud accounting services provide real-time financial data, allowing accountants to make informed decisions quickly, without delays. Cloud accounting services also require minimal IT resources, making them a cost-effective option for accounting departments, especially for small businesses (Attaran & Woods, 2019). According to Khanom, (2017) it was found that, cloud accounting services enable accountants to access financial data from anywhere, at any time, and on any device, making it easier to work remotely and collaborate with team members. These services can be easily scaled up or down depending on the needs of the accounting department, providing flexibility and cost-efficiency (Youssef, 2012). Besides that, cloud accounting services offer robust security measures to protect sensitive financial data from cyber threats and ensure the safety and security of the accounting department's data (Carroll, Van Der Merwe, & Kotze, 2011).



In conclusion, it is evident that cloud accounting services can significantly improve the efficiency, productivity, and accuracy of accounting departments, making them an essential tool for modern businesses. The flexibility, scalability, and cost-effectiveness of cloud accounting solutions make them an increasingly popular choice among small and large businesses. The cloud accounting market is expected to continue to grow and evolve, providing businesses with even more advanced and efficient solutions in the future.

## REFERENCES

- Attaran, M., & Woods, J. (2019). Cloud computing technology: Improving small business performance using the Internet. *Journal of Small Business & Entrepreneurship*, 31(6), 495-519.
- Carroll, M., Van Der Merwe, A., & Kotze, P. (2011). Secure cloud computing: Benefits, risks and controls. In *2011 Information Security for South Africa*. IEEE, 1-9.
- Dimitriu, O., & Matei, M. (2014). A new paradigm for accounting through cloud computing. *Procedia economics and finance*, 15, 840-846.
- Imene, F., & Imhanzenobe, J. (2020). Information technology and the accountant today: What has really changed? *Journal of Accounting and Taxation*, 12(1), 48-60.
- Khanom, T. (2017). Cloud accounting: a theoretical overview. *IOSR Journal of Business and Management*, 19(6), 31-38.
- Mihalache, A. (2011). Cloud Accounting. "Ovidius" University Annals. *Economic Sciences Series 2011*, XI(2), 782-7.
- Motalo, K., Nojeem, L., Ewani, J., Opuiyo, A., & Browndi, I. (2023). Algebraic Multigrid and Cloud Computing: Enhancing Scalability and Performance. *International Journal of Technology and Scientific Research*, 12, 342-348.
- Sutthikun, W., Thapo, R., & Sahayrak, K. (2018). Accounting in the Cloud. *International Journal of Integrated Education and Development*, 3(2), 19-27.
- Youssef, A. E. (2012). Exploring cloud computing services and applications. *Journal of Emerging Trends in Computing and Information Sciences*, 3(6), 838-847.



# NAVIGATING THE UNCHARTED WATERS: THE COMPLEXITIES AND CHALLENGES OF AUDITING CYRPTOCURRENCY

Norizam binti Ahmad @ Muhammad

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

*Corresponding author: norizam@uitm.edu.my*

Cryptocurrency has emerged as a revolutionary digital asset class that has gained significant traction in the global financial landscape. As the popularity of cryptocurrencies continues to soar, so does the need for effective auditing practices to ensure their transparency, reliability, and security. However, auditing cryptocurrency presents a unique set of challenges that differ from traditional financial audits. This article delves into the challenges faced by auditors in assessing the financial statements and controls of cryptocurrency entities, shedding light on critical aspects that must be considered.



One of the primary challenges faced in auditing cryptocurrencies is the absence of a robust regulatory framework and widely accepted auditing standards specific to this emerging asset class (Griffiths, 2020). As a result, auditors often struggle to define the scope and methodology of audits for cryptocurrency entities. The decentralized nature of cryptocurrencies and the absence of a central authority make it difficult to establish clear guidelines for auditors.

Cryptocurrencies operate on blockchain technology, which is complex and continually evolving. Auditors must possess a deep understanding of blockchain fundamentals, cryptographic algorithms, and smart contracts to adequately assess the underlying technology

and its impact on financial reporting (Aminanto, 2021). The intricate nature of blockchain introduces unique risks, such as the potential for data manipulation or unauthorized transactions, which require specialized knowledge to identify and mitigate.



Another significant challenge faced by auditors is the limited availability of complete and reliable data for auditing purposes. While blockchain provides transparency by recording transactions on a public ledger, auditors often struggle to access relevant information due to pseudonymity, data privacy concerns, and the use of off-chain or private transactions (Holland et al., 2020). This lack of access hinders auditors' ability to verify the accuracy and completeness of financial statements, increasing the risk of fraud or misrepresentation.

Cryptocurrencies' volatile nature poses challenges for auditors in determining fair value and recognizing these assets on the financial statements (Hester & Heitfield, 2019). The absence of standardized valuation models, coupled with the high degree of price fluctuations, makes it challenging to establish reliable valuation techniques. Additionally, auditors must address issues related to the recognition and disclosure of cryptocurrency transactions, including classification, measurement, and disclosure requirements (American Institute of CPAs [AICPA], 2019).



Security is a paramount concern in auditing cryptocurrencies. The decentralized and pseudonymous nature of blockchain technology creates vulnerabilities that can be exploited by malicious actors. Auditors face the challenge of evaluating the adequacy and effectiveness of internal controls implemented by cryptocurrency entities to safeguard digital assets and prevent unauthorized access or theft (Griffiths, 2020). Additionally, auditors need to assess the integrity of the wallet systems, key management protocols, and security measures adopted by cryptocurrency exchanges.

Auditing cryptocurrencies presents a unique set of challenges due to the absence of regulatory frameworks, complex technology, limited data availability, valuation issues, and security concerns. Addressing these challenges requires auditors to possess specialized knowledge of blockchain technology, cryptography, and evolving regulatory developments. Collaboration between auditors, standard-setting bodies, and regulatory authorities is essential in developing robust auditing standards and guidelines tailored to cryptocurrencies. Overcoming these challenges will enhance transparency, trust, and investor confidence in the rapidly evolving world of cryptocurrency.

## REFERENCES

- Aminanto, A. (2021). The audit of cryptocurrency financial statements: Challenges and opportunities. *Indonesian Journal of Sustainability Accounting and Management*, 5(1), 41-50.
- American Institute of CPAs. (2019). *Audit and accounting guide: Entities with cryptocurrency holdings*. AICPA.
- Griffiths, M. (2020). Auditing the use of blockchain and cryptocurrency. *Journal of Corporate Accounting & Finance*, 32(3), 87-91.
- Hester, J., & Heitfield, E. (2019). Fair value measurement for cryptocurrencies. *Journal of Accountancy*, 228(6), 38-44.
- Holland, K., Freitas, R., & Davis, R. (2020). Auditing and accounting for blockchain-based cryptocurrencies: Problems and perspectives. *Journal of Emerging Technologies in Accounting*, 17(1), 119-138.

# **THE TIKTOK TAKEOVER: THE UNBELIEVABLE JOURNEY OF THE WORLD'S MOST ADDICTIVE APP**

Norizam binti Ahmad @ Muhammad

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

*Corresponding author: norizam@uitm.edu.my*

TikTok, a social media platform that has taken the world by storm, has experienced a meteoric rise to fame since its inception a few years ago. This article explores the evolution of TikTok, examining its global success and impact on popular culture. Additionally, it examines the platform's potential for financial gain and its role in promoting education. By delving into these aspects, we gain an understanding of TikTok's journey and its influence on various spheres of society.



TikTok's rapid popularity can be attributed to its unique and addictive format. Users can create short-form videos accompanied by music or sound bites, utilizing an array of creative tools and filters to enhance their content (Abidin & Ots, 2020). This format has proven highly engaging, with users spending countless hours scrolling through their personalized "For You" page, which showcases content curated to their interests.

Viral trends and challenges have also played a crucial role in TikTok's rise to fame. From dance challenges to lip-syncing videos, these trends have rapidly spread, capturing the attention of millions of users worldwide. Moreover, many TikTok trends have crossed over into mainstream media, with songs and dances from the platform making their way onto music charts and popular TV shows and movies (Abidin & Ots, 2020). However, it is important to assess the impact of these trends on culture and question the potential for appropriation or trivialization of certain aspects.

TikTok has made a significant impact in Malaysia, with numerous local users achieving fame on the platform. One noteworthy example is Alieff Irfan, also known as "Mat Rempit TikTok," who has garnered a massive following for his videos showcasing his skills as a motorcycle stunt rider (Nasir, 2021). Another popular Malaysian TikToker is Khaby Lama, a comedian who has gained a global audience with his humorous videos commenting on common life situations (Nasir, 2021). These Malaysian influencers exemplify the diverse talent and content that has emerged from the country's TikTok community.



While TikTok is predominantly known for its entertainment value, it has also demonstrated its potential as an educational tool. Educators worldwide have embraced the platform, creating TikTok accounts to share educational content in a fun and engaging manner (Khaerunnisa & Kurniasih, 2020). Science experiments, language lessons, and historical trivia are just a few examples of educational content that has found a home on TikTok. By leveraging the platform's popularity, educators have been able to reach a broader audience and make learning more accessible and enjoyable for students (Khaerunnisa & Kurniasih, 2020). However, it is essential to critically evaluate the accuracy and reliability of educational content on TikTok, as misinformation and misinterpretation can also proliferate on the platform.



Beyond its entertainment and educational aspects, TikTok offers users the potential for financial gain. Many individuals have successfully transformed their TikTok fame into lucrative careers, with the most successful influencers earning millions of dollars (Sharma, 2021). Opportunities for monetization on TikTok include brand partnerships and sponsorships, where influencers promote products to their audience. Additionally, the Creator Fund allows eligible TikTok creators to earn money directly from the platform based on views and engagement (Sharma, 2021). However, it is essential to recognize that financial success on TikTok is not guaranteed for all users, and the pursuit of monetary gains should not overshadow the importance of creating authentic and meaningful content.

TikTok has emerged as a global phenomenon (Moreno, 2021), captivating audiences with its unique format and viral trends (Olajide, 2023). From its rise to fame to its impact on education and the potential for financial gain (Casperson, 2023), TikTok has left an indelible mark on popular culture. However, it is crucial to approach the platform critically, considering potential challenges such as cultural appropriation, misinformation, and the sustainability of financial success. By navigating these aspects thoughtfully, we can fully appreciate the evolution of TikTok and harness its positive influence while addressing its limitations.

## REFERENCES

- Abidin, C., & Ots, M. (2020). *Memes as a mode of political communication on TikTok*. *Social Media + Society*, 6(3), 2056305120948169. <https://doi.org/10.1177/2056305120948169>
- Casperson, N. (2023, March 27). How the future of TikTok may impact a generation's financial literacy. *Forbes*. Retrieved from <https://www.forbes.com/sites/nicolecasperson/2023/03/27/why-the-future-of-tiktok-impacts-the-fintech-industry/?sh=6fe28aa63487>
- Khaerunnisa, M., & Kurniasih, N. (2020). TikTok as an edutainment platform for language learning in the millennial era. *Journal of Language Teaching and Research*, 11(6), 669-676. <https://doi.org/10.17507/jltr.1106.03>
- Moreno, J. (2021, Dec 29). TikTok surpasses Google, Facebook as World's most popular web domain. *Forbes*. Retrieved from <https://www.forbes.com/sites/johanmoreno/2021/12/29/tiktok-surpasses-google-facebook-as-worlds-most-popular-web-destination/?sh=28f0b1943efb>
- Nasir, M. (2021, March 17). TikTok in Malaysia: 11 popular Malaysian TikTok creators to follow. *Vulcan Post*. Retrieved from <https://vulcanpost.com/727531/malaysia-tiktok-creators-follow/>
- Olajide, D. (2023, May 4). Is it time to switch off Tik Tok? *PR Insider*. Retrieved from <https://www.curzonpr.com/theprinsider/is-it-time-to-switch-off-tik-tok/>
- Sharma, S. (2021, April 30). How to make money on TikTok: 4 ways to monetize your TikTok account. *Business Insider*. Retrieved from <https://www.businessinsider.in/business/startups/news/how-to-make-money-on-tiktok-4-ways-to-monetize-your-tiktok-account/articleshow/82239814.cms>



# KELEBIHAN KEUSAHAWANAN SISWA DI ERA DIGITAL

\*Azura Mohd Noor<sup>1</sup>, Fazni Mohamad Fadzillah<sup>1</sup>

<sup>1</sup>Fakulti Perakaunan, Universiti Teknologi MARA, Cawangan Perlis

\*Koresponden: [azura@uitm.edu.my](mailto:azura@uitm.edu.my)



Secara purata, 224,000 graduan dilahirkan pada setiap tahun berbanding penawaran kerja berkemahiran tinggi yang hanya 127,000 pekerjaan (Muhammad Saufi, 2023). Ini menyebabkan lebih 90,000 graduan berdepan dengan masalah pengangguran akibat kekurangan peluang pekerjaan. Justeru itu Kementerian Pengajian Tinggi (KPT) mengambil inisiatif melancarkan Pelan Tindakan Keusahawanan Institusi Keusahawanan Bersepadu Institusi Pendidikan Tinggi (PTK IPT) 2021-2025 pada Februari 2019 dengan tujuan untuk memperkasakan Pendidikan keusahawanan di institusi pengajian tinggi. Pelan ini mewujudkan satu kerangka strategik untuk membentuk ekosistem keusahawanan yang menggabungkan elemen seperti keusahawanan, akademik, industri, kerajaan dan komuniti dalam landskap pendidikan tinggi negara (Siti Rosnita & Nurbarirah, 2021; Hasmira & Aziah 2021).

Dalam konteks negara Malaysia, definisi Usahawan yang diguna pakai adalah individu yang mengambil tanggungjawab dan risiko memulakan, membangunkan dan mengembangkan sesebuah perusahaanan dengan menggembeleng sumber-sumber menjadi sesuatu yang mendatangkan hasil kekayaan dan/atau kesejahteraan sejagat. (Dasar Keusahawanan Nasional 2030, 38). Manakala siswa pula didefinisikan sebagai penuntut atau pelajar di pusat pengajian tinggi (Kamus Dewan Edisi Keempat, 2005). Oleh itu usahawan siswa dikenali sebagai usahawan muda yang masih menjalani proses pembelajaran di peringkat pengajian tinggi. Galakan penglibatan siswazah dalam aktiviti keusahawanan perlu dilaksanakan oleh setiap institusi pengajian tinggi kerana ia mampu mengurangkan isu pengangguran dalam kalangan graduan (Sabarudin et al., 2022). Kelebihan ini dapat dilihat apabila aktiviti – aktiviti keusahawanan di institusi pengajian memberi manfaat kepada siswazah dengan mencetuskan minat mereka untuk mula berniaga sepanjang tempoh pengajian dan meneruskan perniagaan

juga selepas tamat pembelajaran. Keusahawanan siswa sekaligus memungkinkan kadar ketergantungan kepada bidang utama mereka dalam membina kerjaya dapat dikurangkan. Di samping itu, aktiviti-aktiviti tersebut memberi ruang dan peluang kepada usahawan siswazah dalam membina jaringan di kalangan mereka terutamanya dari segi sokongan moral, maklumat dan sumber perniagaan (Suliaty, 2021).

Daripada Said bin Amir al-Ansari berkata, Rasulullah SAW ditanya, “Pekerjaan apakah yang paling baik?”. Baginda menjawab, “Pekerjaan seseorang dengan tangannya sendiri dan setiap perniagaan yang baik.”

(Hadis Riwayat al-Baihaqi, No.1222)

Menurut hadis di atas keusahawanan merupakan suatu kegiatan ekonomi atau bidang pekerjaan yang bagus menurut agama Islam. Kelebihan keusahawanan siswa ini juga boleh dilihat dari sudut kewangan iaitu ia menyediakan hasil pulangan yang berganda jika diusahakan secara bersungguh-sungguh oleh usahawan siswa sepanjang tempoh pengajian mereka (Suliaty, 2021). Usahawan siswa boleh berdikari untuk menyara diri mereka sendiri sepanjang bergelar mahasiswa dengan pendapatan yang ada. Malahan ada usahawan siswa yang turut membantu meningkatkan taraf hidup keluarga mereka melalui pendapatan yang dijanakan oleh perniagaan mereka.

Abdullah Ibnu Abbas RA meriwayatkan bahawa Rasulullah SAW bersabda yang bermaksud: “Rebutlah lima perkara sebelum datangnya lima perkara. Masa sihat sebelum sakit. Masa kaya sebelum datangnya masa sempit (miskin). Masa lapang sebelum tiba masa sibuk. Masa mudamu sebelum datang masa tua dan masa hidup sebelum tiba masa mati”.

(Hadis Riwayat al-Hakim, No.7846 dan al-Baihaqi dalam Shu’ab al-Iman, No.10248)

Hadis di atas menuntut manusia untuk sentiasa peka kepada masa dan mengambil peluang untuk menyelesaikan perkara-perkara berfaedah dengan segera tanpa berlengah. Jatuh bangun dalam perniagaan merupakan cabaran yang akan dialami oleh mana-mana usahawan. Kelebihan utama para usahawan siswa terletak kepada usia mereka. Dengan umur yang muda mereka dikaitkan dengan semangat yang tinggi untuk mencuba sesuatu yang baharu, berani menghadapi cabaran serta mereka dikatakan lebih fleksibel dalam membuat keputusan. Pada masa kini, cetusan teknologi Revolusi Industri 4.0 telah mewujudkan pendigitalisasian teknik-teknik baharu dalam keusahawanan seperti kepelbagaian strategi pemasaran atas talian (Nurzaki, 2021; Siti Rosnita & Nurbarirah, 2021). Pada usia muda sebegini, usahawan siswa mampu memahami dengan cepat dan mengaplikasikan pengetahuan baharu ini dalam perniagaan mereka. Malahan pada usia muda, usahawan siswa mempunyai ruang dan masa yang lebih untuk terus mencuba perbaiki diri serta melakukan penambahbaikan berterusan kepada perniagaan yang dijalankan untuk mendapat hasil yang memberangsangkan dan sekaligus mendapat tempat di hati para pelanggan mereka.

Usahawan siswa turut mempunyai kelebihan dari sudut kesediaan pasaran di dalam institusi pengajian mereka (Nurzaki, 2021). Mereka dikelilingi oleh ribuan pelanggan yang sedia ada

iaitu para pelajar di institusi pengajian yang sama. Malahan staf institusi pengajian tersebut juga adalah sasaran pasaran yang mudah diperolehi kerana berada dalam lokasi yang sama. Usahawan siswa perlu peka dengan kehendak pasaran yang sedia ada ini untuk membolehkan mereka mencari strategi pemasaran yang sesuai untuk menarik bakal pelanggan menjadi pelanggan yang tetap. Selain cara pemasaran secara atas talian seperti facebook, Instagram dan seumpamanya untuk mengiklan produk atau servis yang diberikan, usahawan siswa juga boleh menggunakan cara pemasaran secara peribadi kerana jarak para pelanggan (para pelajar dan staf) hanya di sekitar lokasi yang berdekatan. Ini dapat mewujudkan kepercayaan pelanggan kepada usahawan dan berkemungkinan pelanggan baru akan muncul apabila pelanggan yang sedia ada berpuas hati dengan cara layanan usahawan siswa ini dan menyebarkan maklumat produk atau servis kepada rakan-rakan atau ahli keluarga mereka.

Abu Sa'id RA meriwayatkan bahawa Rasulullah SAW bersabda yang bermaksud: "Perniaga yang jujur dan amanah akan bersama para Nabi, orang yang jujur dan orang yang syahid."

(Hadis Riwayat al-Tirmizi, No.1209)

Hadis di atas menunjukkan betapa agama Islam meninggikan darjat usahawan yang berniaga mengikut etika Islam seperti jujur dan amanah. Keberkatan dalam perniagaan yang dijalankan oleh seseorang usahawan siswa sepanjang pengajian mereka boleh secara tidak langsung memberikan impak positif kepada kehidupan pembelajaran mereka. Kekuatan usahawan siswa melalui akhlak yang mulia juga turut disokong oleh hadis di bawah:

Dari Mu'az bin Jabal RA, bahawa Rasulullah SAW bersabda yang bermaksud: "Sesungguhnya sebaik-baik penghasilan ialah penghasilan para pedagang yang mana apabila berbicara tidak bohong, apabila diberi amanah tidak khianat, apabila berjanji tidak mengingkarinya, apabila membeli tidak mencela, apabila menjual tidak berlebihan (dalam menaikkan harga), apabila berhutang tidak menunda-nunda pelunasan dan apabila menagih hutang tidak memperberat orang yang sedang kesulitan."

(Hadis Riwayat Al-Baihaqi, No.221)

Hadis ini menggariskan sifat-sifat yang perlu ada pada diri usahawan semasa berurusan dengan para pelanggan demi menjamin kejayaan perniagaan mereka. Pelanggan dan bakal pelanggan merupakan pihak yang akan membeli produk atau servis yang ditawarkan oleh usahawan siswa. Sebagus mana produk atau servis yang ditawarkan tanpa disertai akhlak yang mulia, usahawan siswa tidak akan berjaya dalam perniagaannya bagi jangka masa yang panjang. Memberi penerangan yang benar berkenaan produk atau servis yang diberikan dapat meningkatkan tahap kepercayaan pelanggan kepada seseorang usahawan siswa tersebut dan ini merupakan kekuatan ini amat penting yang tiada tolok bandingnya. Tidak perlu menjatuhkan produk orang lain hanya untuk menunjukkan produk kita yang terbaik. Apabila pelanggan yang sedia ada mempunyai kepercayaan yang tinggi kepada seseorang usahawan siswa tersebut, berkemungkinan besar pelanggan-pelanggan baru akan turut muncul.

Secara kesimpulannya, menurut agama Islam menuntut ilmu dan bekerja merupakan suatu bentuk ibadah yang mulia dan mampu menaikkan darjat orang-orang yang melakukannya. Para usahawan siswa beruntung kerana mampu melakukan kedua-duanya serentak dan juga memperoleh pelbagai manfaat seperti memperoleh sumber kewangan dan juga peningkatan kemahiran diri. Dalam menceburi bidang keusahawanan, usahawan siswa perlu sentiasa memastikan keutamaan diberikan kepada pembelajaran mereka tanpa kompromi. Kajian oleh Rao, Rahman & Othman (2022) mendapati secara keseluruhannya, pelajar Universiti Awam mempunyai keinginan keusahawanan. Pendedahan kepada pelbagai kemahiran, sikap dan keadaan persekitaran yang kondusif diperlukan supaya mereka dapat membina pemikiran dan keinginan keusahawanan dalam diri mereka. Oleh yang demikian institusi pengajian tinggi perlu peka dengan perkembangan semasa supaya penyaluran ilmu keusahawanan yang terkini kepada para siswazah berjalan dengan lancar. Selain itu perancangan aktiviti keusahawanan perlu sering dilaksanakan bagi membantu para usahawan siswa memperkenalkan produk atau servis mereka dan sekaligus menaikkan minat kepada bakal usahawan siswa untuk menceburi bidang keusahawanan apabila melihat sokongan padu yang diberikan oleh pihak institusi pengajian tinggi.

## RUJUKAN

- Hasmira, A. & Aziah, I. (2021). Pembangunan atribut keusahawanan dalam kalangan pelajar Kolej Vokasional KPM: Sasaran dan strategi pelaksanaan. *Jurnal Kepimpinan Pendidikan*, 8(3), 18 – 37.
- Kamus Dewan*. Edisi Keempat. (2005). Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Kementerian Pembangunan Usahawan. (2019). *Dasar Keusahawanan Nasional 2030*, diambil dari <https://www.pmo.gov.my/ms/2019/08/dasar-keusahawanan-nasional/>
- Muhammad Saufi, H. (2023, 8 Februari). *90,000 bakal menganggur*, diambil dari <https://www.hmetro.com.my/utama/2023/02/937225/90000-bakal-menganggur>
- Nurzaki, I. (2021, 21 September). *Revolusi industri 4.0 pencetus usahawan pelajar masa kini*, diambil dari <https://www.dagangnews.com/article/revolusi-industri-40-pencetus-usahawan-pelajar-masa-kini-9137>
- Rao, N. H. C., Rahman, R. S. A. R. A., & Othman, N. (2022). Keusahawanan pelajar institusi pengajian tinggi: Adakah sikap, kemahiran dan persekitaran membentuk keinginan. *International Journal of Education, Psychology and Counselling*, (IJEPC), 7(48), 601 – 619.
- Sabarudin, A., Lokman, N. H., Jantan, N. S., Zainuridin, N. A., Abd Halim, A., & Khoiry, M. A. (2022). Tinjauan keberkesanan program keusahawanan di Universiti Kebangsaan Malaysia (UKM) terhadap kebolehpasaran graduan menurut perspektif alumni UKM. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(2), 1 – 14.
- Siti Rosnita, S. & Nurbarirah, A. (2021, 25 September). *Kreativiti tenaga kerja universiti corak usahawan graduan digital*, diambil dari <https://www.bharian.com.my/rencana/muka10/2021/09/868501/kreativiti-tenaga-kerja-universiti-corak-usahawan-graduan-digital>
- Suliaty, A. (2021, 4 Januari). *Keusahawanan siswa*, diambil dari <https://www.hmetro.com.my/13cademia/2021/01/659961/keusahawanan-siswa>



## A BRIEF INTRODUCTION TO COLLABORATIVE LEARNING

\*Fazni Mohamad Fadzillah<sup>1</sup>, Azura Mohd Noor<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [faznimf@uitm.edu.my](mailto:faznimf@uitm.edu.my)

A journey of learning has no end. Lifelong is important for our existence. Social Development Theory makes it clear that socialization has a direct influence on an individual's learning process (McLeod, 2023). The theory emphasis on the importance of social interaction for the development of learning and cognition. By socializing with someone who has more knowledge about the subject to be learned, we transfer knowledge and begin the learning process. Collaborative learning is a learning style that encourages teamwork and social interaction. Through collaborative learning, individuals can learn to be more tolerant of each other, and through cooperation and encouragement, all members can successfully learn to share ideas.



Collaborative learning is an educational approach in education where students enhance learning by working together. Frequently it is called the peer learning process, and, in this process, students work in groups to discuss various activities, find results to different education-related problems, complete tasks, or learn new ideas. Collaborative learning is essential in the modern learning process, and it is effective to develop a higher level of thinking, self-management, and oral communication by this learning approach (Rao, 2019).

This is an approach to education that embraces working in groups to accomplish shared learning goals. All members of a group are actively involved in processing and integrating information and ideas. Unlike the traditional way of learning where students work and learn

individually. Smith and MacGregor (1992) also mentioned that collaborative learning is an umbrella term for a variety of educational approaches that comprise joint intellectual efforts by students, or students and teachers. Collaborative learning represents a significant departure from the typical lecture-centred classroom environment.

There is a very wide range of approaches to collaborative learning. The four common approaches of collaborative learning are explained as follow (Smith & MacGregor, 1992). The first is the “think-pair-share” approach, where students are given a short problem, a question to prompt discussion, or a topic to discuss (Davidson & Major, 2014). This is the most common type of collaborative learning where students must independently and communicate their ideas to peers. The next approach is ‘problem-based-learning’ (PBL), which is a student-centred approach. This is where students usually learn a topic in groups to solve an open-ended problem within a time frame. This will develop problem solving abilities and decision-making capabilities.



In addition, the “case study” approach provides students with example problems from real life situation. Case study require students to observe and analyse the problems. The next approach is the “peer teaching” approach, where students teach other students. Tutoring is an example of peer teaching where an older student guides and teaches a younger student how to learn. When students work and learn together, they create a better learning experience and have a positive impact on their performance. Furthermore, this will give them space to explore new areas (Chandra, 2015).

Collaborative learning enables students to think creatively and innovatively. Moreover, collaborative learning has been shown to not only enhance students’ higher-level thinking skills, but also boost their confidence and self-esteem (Chandra, 2015). Thus, group projects



can maximize the educational experience by developing skills that enables students to tackle more complex problems, delegate roles and responsibilities and at the same time improving social and interpersonal skills. Students learn how to work with different types of learners and develop their leadership skills (Davidson & Major, 2014). When students work together, they create a better learning experience and lead to an understanding of different perspectives. Several studies found that collaborative learning has numerous benefits compared to competitive and individualistic efforts, and frequently leads to higher achievement and greater productivity, supportive and committed relationships, better mental health, and social competence (Laal & Ghodsi, 2012; Haataja et al., 2022; Alharbi et al., 2022). Moreover, a study done by Warsah, et al. (2021) also revealed that collaborative learning had a positive and significant impact on learners' critical thinking skills, supported the retention of their critical thinking skills and learners perceived that collaborative learning also contributed to their emotional awareness, learning motivation, cognitive development, and broad-mindedness.

Recent development has seen an adaptation of collaborative learning techniques being used to teach students online in the form of collaborative learning. According to Harasim (2006), Online Collaborative Learning can be defined as learning model in which students are encouraged and supported to work together to create knowledge. Moreover, they learn to ascertain, to discover ways to innovate, and by so doing, to seek the conceptual knowledge required to solve difficulties instead of reciting what they think is the correct solution. This is supported by Alharbi et al. (2022) that use the term e-collaborative learning, which defined as a communicative shared-knowledge building technique that uses networked electronic devices to achieve shared-knowledge building aims. It highlights the positive interaction importance among learners via encouraged them to ask questions, exchange arguments, give elaborate explanations, problem solutions and formulate new ideas.

Collaborative learning has proven to be effective in face-to-face classrooms. In recent times, digital transformation has formed many more and new methods of learning and teaching. New technology and the internet have allowed for the adaption of collaborative learning across distance and time barriers. These technologies can also serve as a collaboration in learning by engaging learners with new thoughts, accelerating knowledge sharing, enhancing students' reflective thinking and analytical skills, and helps the development of critical thinking with the capacity for "self-learning" (Aldoayan et al., 2019; Alharbi et al., 2022). Furthermore, Online Collaborative Learning created innovation in learning environment for student within a digital space. Technology advancements can facilitate collaborative learning effectively by making it convenient to communicate and gather information among group members working remotely.

In summary, collaborative learning encourages members of a group to have interdependence competencies in skill, expertise, abilities, and knowledge. They are also accountable for their group's performance and are committed to completing task together. Working through a problem as a group can benefit students develop their own problem-solving skills in discovering new ways to overcome different types of circumstances at work. Collaborative learning between people is what makes for effective work. Any classroom or workplace that encourages collaboration creates an environment that facilitate success. Learning

collaboratively required responsibility, persistency, cooperation and commitment from all parties.

## REFERENCE

- Aldoayan, M., Sahandi, R., John, D., & Cetinkaya, D. (2019). *Collaborative cloud-based online courses: Issues and challenges*. Paper presented at the Proceedings of the 2019 8th International Conference on Educational and Information Technology.
- Alharbi, S. M., Elfeky, A. I., & Ahmed, E. S. (2022). The effect of e-collaborative learning environment on development of critical thinking and higher order thinking skills. *Journal of Positive School Psychology*, 6(6), 6848-6854.
- Chandra, R. (2015). Collaborative learning for educational achievement. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 5(3), 2320-7388.
- Davidson, N., & Major, C. H. (2014). Boundary crossings: Cooperative learning, collaborative learning, and problem-based learning. *Journal on Excellence in College Teaching*, 25(3&4), 7-55.
- Haataja, E., Dindar, M., Malmberg, J., & Järvelä, S. (2022). Individuals in a group: Metacognitive and regulatory predictors of learning achievement in collaborative learning. *Learning and Individual Differences*, 96, 102146.
- Harasim, L. (2006). *A History of E-learning: Shift Happened*. In: Weiss, J., Nolan, J., Hunsinger, J., Trifonas, P. (eds) *The International Handbook of Virtual Learning Environments*. Springer, Dordrecht.
- McLeod, S. (2023, June 2). *Lev Vygotsky's sociocultural theory of cognitive development*. Retrieved from [https://www.simplypsychology.org/vygotsky.html?ezoi&\\_amp=1&fb\\_comment\\_id=500779888714\\_15217241](https://www.simplypsychology.org/vygotsky.html?ezoi&_amp=1&fb_comment_id=500779888714_15217241)
- Rao, P. S. (2019). Collaborative Learning in English language learning environment. *Research Journal of English Language and Literature*, 7(1), 330-339.
- Smith, B.L., & MacGregor, J. (1992). *Collaborative learning: a sourcebook for higher education*. University Park, PA: National Centre on Postsecondary Teaching, Learning, and Assessment (NCTLA). 9-22.
- Warsah, I., Morganna, R., Uyun, M., Afandi, M., & Hamengkubuwono, H. (2021). The impact of collaborative learning on learners' critical thinking skills. *International Journal of Instruction*, 14(2), 443-460.

# THE TECH-ACCOUNTANT: HARNESSING TECHNOLOGICAL PROWESS IN THE ACCOUNTING PROFESSION

Nor Kartini Mohd Rodzi

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

*Corresponding author: norkartini@uitm.edu.my*

**ACCOUNTING GLOBAL WEEK 2023**

Accountability

JOIN US!!

**Tech-Accountant, Prowess and Profession**

19 MAY 2023  
14.30 (MYT)  
13.30 (WIB & ICT)

**Guest Speaker:**  
FADRULLAH BIN SAFIAN  
Business Analyst Reporting, Risk & Platform Financial Management Group  
Macquarie Group Limited, Australia

**Rapporteur:** NOR KARTINI MOHD RODZI  
UiTM Perlis Branch

**Organized by:**  
FACULTY OF ACCOUNTANCY  
UITM PERLIS BRANCH  
PERLIS, MALAYSIA

Youtuber:  
<https://youtube.com/live/UCZwcyehUM?feature=share>  
Webex Link:  
<https://tinyurl.com/mvqcnctz>

**FOLLOW US ON:** f i b

#goaccounting  
#myvisionmyvalue

<http://perlis.uitm.edu.my>

In today's rapidly evolving digital landscape, the role of accountants has been reshaped by technological advancements. The emergence of the technology accountant, armed with a blend of accounting expertise and technological prowess, has brought about significant transformations in the accounting profession. This article explores the intersection of technology and accounting, highlighting the skills and capabilities required for success as a technology accountant. "Tech-Accountant – Prowess and Profession" is the title of the presentation, delivered by Mr Fadruallah Sopian, Business Analyst at Macquarie Group Ltd,

Australia during Accounting Global Week 2023 organised by the Faculty of Accountancy, Universiti Teknologi MARA Perlis Branch in May 2023.

The evolution of accounting software begins with challenges faced by early accounting methods. These included handling simple transactions, managing a limited amount of data, and relying on manual data entry and record keeping. As time passes, accounting practices undergo changes, necessitating more complex transactions involving larger volumes of data, often utilizing spreadsheets. Today, technology is employed to streamline accounting processes which have become even more complex due to the large volume of data, often utilizing on-premises enterprise resource planning (ERP) systems. The latest advancements in accounting software development require cloud-based ERP solutions that can manage increasingly complex transactions involving large amounts of data (Singh, 2020).

According to Mr Fadrullah, the technology accountant is a professional accountant who embraces and incorporates technological skills as a crucial aspect of his work. In today's context, technology is no longer considered a luxury but rather a fundamental requirement. Accountants have a profound understanding of accounting principles and regulations, and they leverage technological tools to enhance efficiency, analyse complex data sets, and offer valuable insights to stakeholders. Implementing and updating accounting systems necessitates the involvement of various professionals such as project managers, business analysts, change management specialists and test specialists. These professionals collaborate with accountants to successfully implement and enhance accounting solutions.



The skills and capabilities required for a project manager in the finance field include financial acumen, project management skills, communication skills, leadership skills and analytical and problem-solving skills. Financial acumen requires an understanding of financial principles, analysis, budgeting, risk assessment, and reporting is essential for making informed decisions. Project management skills necessitate planning, organizing, and executing projects effectively. Communication skills are the ability to communicate clearly and concisely with stakeholders, team members, and executives. Leadership skills are the ability to motivate and lead teams, resolve conflicts, foster collaboration, and delegate tasks to achieve project success. Analytical and problem-solving skills is the capacity to evaluate financial data, identify problems, develop



solutions, and make informed decisions to overcome challenges is vital in the finance project management. These skills collectively provide a strong foundation for effective financial project management (Pticar, 2020).

Data analysis and modelling, agile methodology, User experience (UX) design, business process modelling, and communication and collaboration are the set of skills and capabilities required for a business analyst. Data analysis and modelling require proficiency skills in analysing and large datasets to extract insights and identify trends using tools such as SQL, Excel, and statistical software. Agile methodology is the ability to understand and work effectively in an agile environment, including facilitating sprint planning, daily stand-ups, and retrospectives. User experience (UX) design necessitates a basic understanding of UX design principles, conducting user research, creating user personas, and collaborating with UX designers to create wireframes and prototypes. Business process modelling involves modelling business processes to identify inefficiencies and develop streamlined processes that improve operations and reduce costs. Furthermore, communication and collaboration are skills that enable effective collaboration with stakeholders, developers, and project managers, including articulating requirements and negotiating solutions. These skills enable business analysts to adapt to the evolving business landscape and contribute to successful projects.



A change management specialist in a finance project skills and capabilities encompass change management expertise, stakeholder management, financial acumen, project management skills and analytical and problem-solving skills. Change management expertise require a deep understanding of change management principles, methodologies, and frameworks, as well as the ability to develop strategies, conduct impact assessments, and create communication plans. Stakeholder management is an effective interpersonal and communication skills to engage with stakeholders, build relationships, manage expectations, and address concerns throughout the project. These skills enable a change management specialist to lead successful change

initiatives within financial projects by navigating complexities, engaging stakeholders, and aligning with financial objectives.

A test specialist required an accounting professional to have a range of skills and capabilities in various accounting fields including financial accounting and reporting, auditing and assurance, taxation, business advisory, financial management, corporate finance, and forensic accounting. The role of the accountant is changing rapidly due to emerging technologies and new accounting software programs, which have automated tasks. These technologies encompass data analytics and visualisation, accounting software, ERP Systems, cloud computing, automation, and robotic process automation (RPA), and cybersecurity awareness. These technologies empower accountants to improve their analytics, streamline processes, and ensure data security, thereby increasing their value in the accounting profession (Education, 2023).

Although these technological skills are not mandatory for all accountants, acquiring them can enhance their professional profile, increase their efficiency, and enable them to add value in an increasingly digital and data-driven environment (Kroon et al., 2021). The technology accountant represents the convergence of accounting expertise and technological prowess, embodies the future of the accounting profession. By leveraging technology to streamline processes, analyse data, and provide valuable insights, technology accountants are well-positioned to drive financial innovation, elevate the profession, and navigate the complex challenges of the digital age. As technology continues to evolve, the role of the technology accountant will continue to expand, shape the future of accounting and finance.

## REFERENCES

- Kroon, N., Do Céu Alves, M., & Martins, I. (2021). The impacts of emerging technologies on accountants' role and skills: Connecting to open innovation-a systematic literature review. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3). <https://doi.org/10.3390/joitmc7030163>
- Pticar L. K. (July 19, 2020). *Finance and business acumen skills - their importance and development* <https://www.linkedin.com/pulse/finance-business-acumen-skills-importance-katarina-lasic>
- Singh S. (November 2, 2020). *The Evolution of Accounting Software: Past, Present and Future* <https://technologycounter.com/blog/evolution-of-accounting-software>
- Education S. (June 14, 2023). *The Evolving Role of Technology in the CPA Profession* [https://www.linkedin.com/pulse/evolving-role-technology-cpa-profession-simandhar-education?trk=article-ssr-frontend-pulse\\_more-articles\\_related-content-card](https://www.linkedin.com/pulse/evolving-role-technology-cpa-profession-simandhar-education?trk=article-ssr-frontend-pulse_more-articles_related-content-card)



# ARTIFICIAL INTELLIGENCE (AI) VS HUMAN ACCOUNTANT

\*Nazirah Naiimi<sup>1</sup>, Salwana Selamat<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [nazirahnaiimi@uitm.edu.my](mailto:nazirahnaiimi@uitm.edu.my)

Artificial Intelligence (AI) has taken control of a significant part of accountants' tasks. According to Leitner H, S. et al. (2021), AI-based technologies such as intelligent robots, automated tools and business intelligence tools have to replace humans as actors and transform processes in accounting. The most affected tasks are data entry, transaction processing, and basic bookkeeping. AI-powered software can, for example, automatically categorize and record financial transactions, process invoices, and reconcile accounts, reducing the need for manual data entry and repetitive tasks. AI-driven data analytics tools can also analyze large datasets, identify patterns, and generate financial reports more efficiently than traditional methods. As a result, accountants can focus on higher-level tasks, such as financial analysis, strategic planning, and providing valuable insights to clients or stakeholders.



## What is an Artificial Intelligence (AI)?

AI refers to the simulation of human intelligence in machines which are programmed to think, learn, and perform tasks that typically require human intelligence. Frankenfield (2023), AI encompasses a wide range of technologies, including machine learning, natural language processing, computer vision, robotics, and expert systems.

Among of the examples of AI in accounting include:

1. **Data Entry and Processing:** AI-powered systems can automate data entry tasks, such as scanning and extracting information from invoices, receipts, and financial documents. This reduces the need for manual data entry and minimizes errors.

2. **Bookkeeping and Transaction Categorization:** AI can accurately categorize and record financial transactions, making it easier for accountants to manage and reconcile accounts.
3. **Fraud Detection:** AI algorithms can analyze financial data to detect anomalies and potential fraud, helping auditors and accountants identify suspicious activity.
4. **Financial Reporting:** AI can produce financial reports and statements by analyzing large amounts of data quickly and accurately, provide timely and insightful information for decision-making.
5. **Predictive Analytics:** AI-powered tools can analyze financial data to make predictions and forecasts, to help with in budgeting, financial planning, and risk assessment.
6. **Tax Compliance:** AI can help accountants stay abreast of hanging tax regulations and prepare tax returns accurately and efficiently.
7. **Virtual Assistants:** AI-driven virtual assistants can interact with users, answer accounting-related questions, and provide financial information in real-time.

As technology continues to advance, AI is expected to play an increasingly significant role in accounting profession, shaping the way financial data is processed, analyzed, and used to support business decisions. Although AI and automation are transforming various aspects of the accounting profession, it is unlikely that AI will completely replace accountants in the foreseeable future (Envoice, 2023; Leitner et. al, 2021). There are several reasons why human accountants will continue to be essential:

1. **Complex Decision-Making:** Accounting involves critical decision making, strategic planning, and financial analysis. Although AI can help with data analysis, it may lack the contextual understanding and judgement required for complex financial decisions.
2. **Interpretation and Communication:** Accountants need to interpret financial information, communicate the results to clients or stakeholders, and provide insights for informed decision-making. AI may not be as good at in understanding the details of human language and emotions. This is in line with the findings of Leitner et al. (2021), according to which the accountant will continue to communicate with authorities and auditors and clarify possible discrepancies and necessary system adjustments.
3. **Regulatory Compliance and Ethics:** Accountants must adhere to various legal standards and ethical guidelines. Human accountants are more expert at navigating the difficulties of compliance and ensuring ethical practices.
4. **Client Relationships:** Building and maintaining customer relationships often requires human empathy, understanding, and trust, which are not qualities associated with AI.
5. **Adaptability:** Accountancy is about facing unique challenges and evolving business scenarios. Accountants possess the capacity to adapt and acquire new skills in response to industry changes.

6. **Creativity and Innovation:** While AI can process data efficiently, creativity and innovation remain uniquely human attributes that can be invaluable for problem-solving and business growth.
7. **AI as a tool, **NOT** a substitute:** AI is best viewed as a tool to strengthen and enhance the capabilities of accountants rather than a substitute. By AI, accountants can streamline processes, gain access to valuable insights, and improve their decision-making skill.
8. **Job Complexity:** In more specialized accounting tasks, such as forensic accounting, auditing, complex financial transactions, or providing strategic financial advice, human expertise are crucial.

To prepare for and challenge AI, accountants should focus on developing skills and competencies that complement AI's capabilities and leverage its unique strengths. The following are ways in which accountants can equip themselves:

1. **Embrace Technology:** Accountants should keep abreast of the latest advancements in AI and other emerging accounting technologies field. Understanding the potential and limitations of AI will enable them to work effectively with AI systems.
2. **Develop Analytical Skills:** Accountants can focus on enhancing their analytical skills, such as in data analysis, financial modelling, and interpreting AI-generated insights. This enables them to make better strategic decisions and add value to their clients or businesses.
3. **Improve Problem-Solving Skills:** Accountants should sharpen their problem-solving skills and critical thinking skills to deal with complex financial issues that AI may not yet be able to solve in its own.
4. **Emphasize on Communication:** Effective communication skills are essential for accountants to explain financial data and AI-generated insights to clients, colleagues, or stakeholders. The ability to communicate complex financial information clearly and understandably remains a distinct human advantage.
5. **Acquire Industry Knowledge:** Accountants need to further their knowledge of industry-specific regulations, compliance, and business practices. AI can help with data processing, but accountants' expertise in interpreting and applying accounting standards is irreplaceable.
6. **Focus on Creativity and Innovation:** Accountants can focus on creativity and innovation in their work. While AI can take over routine tasks, accountants can contribute through creative problem-solving, strategic thinking, and providing innovative financial solutions.

7. **Lifelong Learning:** Continuous learning is essential in a dynamic environment where technology is constantly evolving. Accountants should engage in ongoing professional development to keep abreast of AI developments and adapt their skills accordingly.
8. **Embrace Collaboration:** Accountants should be open to working with AI systems and technology experts. A collaborative approach allows for the best integration of AI tools with human expertise, leading to optimal results.
9. **Foster Ethical Decision-Making:** As AI becomes increasingly involved in decision-making processes, accountants need to bring ethical considerations to the forefront and ensure that AI-driven decisions comply with professional and legal standards.
10. **Emphasize Client-Centricity:** Accountants can focus on providing personalized and client-centric services that go beyond data analytics. Understanding clients' individual needs and tailoring financial advice to them will remain essential to building trust and strong relationships (Rana, 2019).

Accountants can position themselves to work effectively with AI and remain indispensable in an evolving accounting landscape. Equipped with the right skills and mindset, accountants can successfully navigate the challenges and opportunities presented by AI. By embracing AI as a tool and keeping up with technological advancements, accountants can remain relevant and add significant value in their roles.

## REFERENCES

- Leitner-Hanetseder, S., Lehner, O. M., Eisl, C., & Forstenlechner, C. (2021). A profession in transition: Actors, tasks and roles in AI-based accounting. *Journal of Applied Accounting Research*, 22(3), 539-556.
- Frankenfield, J. (2023, April 24). *Artificial intelligence: What it is and how it is used*. Investopedia. Retrieved from <https://shorturl.at/tlUX5>
- Envoice (2022, February 22). *Will Accountants be replaced by AI and become obsolete?* Retrieved <https://shorturl.at/AIOT1>
- Rana, K. (2019, August). *Will Accountants be replaced by AI in this decade?*. CAclubindia.

# UNVEILING THE PERILS AND CATASTROPHIC VULNERABILITIES OF CYBER SECURITY ATTACKS IN ACCOUNTING

\*Marjan Mohd Noor<sup>1</sup>, Norshimah Abdul Rahman<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [marjan@uitm.edu.my](mailto:marjan@uitm.edu.my)

The field of cyber security is indeed constantly evolving, with new challenges and threats every year. It is crucial in the cyber realm, which is an entity made up of bits, to both protecting and enabling the defence of secret data and information. Using cutting-edge digital technology and their extraordinary, interconnected capabilities, cyber threat attacks become a reality. As a result, the term "cyber security" can be used to refer as a body of knowledge about the technologies, procedures, and practises used to safeguard computer systems, networks, or programmes as well as data stored in cyberspace against assault, damage, or unauthorized access (Li & Liu, 2021).



According to the Canadian Centre for Cyber Security (2022), the various kinds of cyber threats are becoming more sophisticated and threat actors are using various techniques that are difficult to detect. Survey conducted by the Office for National Statistics (ONS) for the year ending March 2022, compared to other crimes, people in England and Wales are most affected by fraud or cyber offences (ONS, 2022). Compared to the year ending March 2020, the number



of fraud offences increased by 25% (to 4.5 million offences), mainly due to a significant increase in "advance fee fraud" and "consumer and retail fraud". Computer misuse has increased by 89% (to 1.6 million offences) compared to the fiscal year ending March 2020, due to a sharp increase in offences related to unauthorized access to personal data (hacking) (ONS, 2022).

However, data is increasingly becoming a target for cybercriminals across the region, and Malaysia is no exception. With nearly four thousand reports of cyber threat incidents reported to the Cyber Security Malaysia through the Malaysia Computer Emergency Response Team (MyCERT) in 2022, online frauds were the most commonly reported cyber threats, followed by malicious codes (Statista Research Department, 2023). When analysing the impact of the adoption of cutting-edge digital technologies on the changes taking place in today's business organizations, it is important to consider the intrinsic complexity of all the systems, devices, and networks used to perform the relevant tasks as well as other professional practices. As the rate of cyber threats increases and may affect many areas of business of all sizes, there is no doubt the threat actors are looking at the accounting profession as their potential target (Salman, 2020). According to Gary Salman (2020), a CEO of Black Talon Security (specializing in business cyber security) reports that since the start of the COVID -19 pandemic, cyber-attacks on accounting firms have increased by 300%. This is because this professional sector is already vulnerable to cybercrime and is struggling to cope with the difficulties of remote working (Salman, 2020). Due to the increasing threats and risks to which accounting systems and financial data are exposed, accounting cyber security must be a top priority (Prince, 2022).

Cybersecurity Automation Team (2023) defines an accounting cyber security as a collection of procedures, controls, and tools aimed at preventing unauthorised access, cyberthreats, data breaches, and other potential risks to accounting systems, financial data, and related information. In order to secure the confidentiality, integrity, and accessibility of accounting data, security controls, protocols, and policies must be put into place (Tierney, 2021). Accounting cyber security aims to safeguard financial data, uphold the privacy of sensitive information, adhere to legal obligations, reduce risks, and prevent unauthorized activities that could compromise the accuracy and reliability of accounting procedures and financial reports. Hackers are aware that businesses with insecure systems that contain sensitive financial data and expose the data to cyber criminals can be an easy target as cyber-attacks increase. Thus, the cyber security in accounting is vital as its practices ensure the protection of company's sensitive financial data, not just for the sake of compliance but also for the safety of company's clients who have put their trust on the company with their financial, personal, and professional information (Lehenchuck et al., 2022).

However, accounting faces a variety of challenges as it deals with the most valuable financial data that is highly likely to be breached (Vasilesky, 2023). The potential perils and the corresponding vulnerabilities posed by cyber security attacks on accounting firms can be catastrophic (Yap, 2023; Politzer, 2020). The cyber security breaches targeting accounting firms can undoubtedly result in calamitous outcomes, as these firms handle extremely sensitive financial and personal data. Even though the topic of cyber security in accounting is evolving, with new threats and risks emerging every day, familiarizing ourselves with several conceivable hazards and the corresponding vulnerabilities of accounting cyber security attacks including rising of data breaches, ransomware, phishing attacks, and legal consequences is a good place to start (Alawida et al., 2022).

Professional service accounting and auditing firms retain vast amounts of financial information, including tax records, payroll data and financial statements. They are often seen as attractive targets for hackers. This is mainly because they have a wealth of confidential data, and their data security measures are considered less advanced compared to financial services and healthcare sectors (Peacock, 2019). There are several factors have played a role in data breaches. These include cases such as an employee may click dubious Uniform Resource Locator (URL) links provided in unsolicited text messages or unwittingly providing security information during a phishing attack, introducing malware through a third-party system, or neglecting to update software, allowing vulnerabilities to be exploited (De Groot, 2023). Vulnerabilities encompass weak and inadequate passwords, unpatched software, and insufficient encryption may lead to identity theft, financial fraud, and reputational damage for both the firms and their clients.

Ransomware is a type of malicious software or also known as malware that encrypts files and data, rendering them inaccessible until a ransom is paid to unlock and decrypt them (Gillis & Lutkevich, 2021). Accounting firms can be extremely targets for ransomware attacks due to their significant potential impact. Ransomware is developed with the intention of gaining control over computers, networks, files, and sensitive data by encrypting files and preventing the owners access to them. Afterwards, usually the attacker demands payment, often in anonymous cryptocurrencies such as Bitcoin, to restore access to these files. This situation probably disrupts company's business operations and lead to significant financial losses. Unsecured remote desktop services are one of the vulnerabilities of ransomware. Basically, remote desktop services allow users to access a computer or network from a remote location. If these services are not properly secured, they can become a gateway for cybercriminals as the attackers can exploit weak or default passwords, open ports or known vulnerabilities in the service's software.

America Cyber Security and Infrastructure Security Agency (2021) defines phishing as a form of social engineering attack. Phishing is a common method used by cybercriminals to trick people into divulging confidential information or downloading malware. Accounting firms are an attractive target because they handle valuable financial data. Attackers send fraudulent emails that appear legitimate, often posing as trusted institutions such as banks, tax authorities or customers. Employees may be tricked into clicking on malicious links or downloading malicious attachments. In some cases, attackers specifically tailor their phishing attempts to employees of accounting firms. They conduct research to gather information about the target, such as their role, duties and contacts. This allows them to create highly convincing emails that are more likely to be opened. Accounting firms have to deal with a high volume of emails and messages every day. This sheer volume can make it difficult for staff to thoroughly review each message, increasing the likelihood of inadvertently interacting with malicious content. Although companies implement security measures and provide cyber security training, human error remains a major factor in security breaches. Even trained employees occasionally make mistakes and click on malicious links or unintentionally download harmful attachments.

The Professional Concepts Insurance Agency (2022) highlighted that accounting firms may face significant legal consequences such as client lawsuits and reputational damage if they fail to adequately protect sensitive data. These legal consequences can arise from a variety of sources, including clients and regulators. When accounting firm works with a client, there is often a contractual agreement that sets out the firm's obligations to protect sensitive data. If the

firm does not comply with these obligations, it may be in breach of contract, which makes it liable for damages under the contract. While clients can also bring claims for negligence on the part of the accounting firm. They may argue that the firm failed to take reasonable steps to protect their financial data, resulting in a data breach. If negligence is proven, the firm can be held for the client's financial losses. In the case of significant data breaches affecting multiple clients, affected parties may join together and bring to file class-action lawsuits against the accounting firm. These lawsuits can lead to significant financial liabilities for the firm. The legal consequences go beyond financial damage. A data breach can damage the reputation of an accounting firm. Clients may lose confidence in the firm's ability to protect their data, leading to loss of business and difficulty in attracting new clients.

In summary, the potential perils of cyber security attacks on accounting firms are multifaceted, ranging from financial loss and reputational damage to legal and regulatory consequences. It is critical for accounting firms to prioritize cyber security to protect their clients, operations and reputation. Investments in cyber security should be viewed as a proactive strategy that accounting firms must prioritise especially in cyber security measures including robust data encryption, employee training, and compliance with relevant data protection regulations. While these investments may come at a cost, they are an essential part of modern business operations, especially for accounting firms that deal with sensitive financial data. This investment strategy is to ensure the firm's long-term resilience and success in an increasingly digital and connected world. In accounting, where trust and accuracy are paramount, cyber security is the foundation on which that trust is built and maintained.

## REFERENCES

- Alawida, M., Omolara, A. E., Abiodun, O. I., & Al-Rajab, M. (2022). A deeper look into cybersecurity issues in the wake of Covid-19: A survey, *Journal of King Saud University – Computer and Information Sciences*, 34(10), 8176 – 8206.
- America Cyber Security and Infrastructure Security Agency. (2021, February 1). *Avoiding social engineering and phishing attacks*. <https://www.cisa.gov/news-events/news/avoiding-social-engineering-and-phishing-attacks>
- Canadian Centre for Cybersecurity. (2022, October 28). *An introduction to the cyber threat environment*. <https://www.cyber.gc.ca/en/guidance/introduction-cyber-threat-environment>
- Cybersecurity Automation Team (2023). *What is cybersecurity in accounting*. <https://www.cybersecurity-automation.com/what-is-cybersecurity-in-accounting/>
- De Groot, J. (2023, May 5). 4 steps to prevent phishing attacks (According to 33 experts). *Fortra*. <https://www.digitalguardian.com/blog/phishing-attack-prevention-how-identify-prevent-phishing-attacks>
- Gillis, A. S., & Lutkevich, B. (2021, December). *Ransomware*. <https://www.techtarget.com/searchsecurity/definition/ransomware>
- Lehenchuck, S., Vygivska, I., & Haryhorevska, O.O. (2022). Protection of accounting information in the conditions of cyber security. *Problems of Theory and Methodology of Accounting Control and Analysis*, 2(52), 40 – 46.

- Li, Q., & Liu, Q. (2021). A comprehensive review study of cyber-attacks and cyber security: Emerging trends and recent developments. *Energy Reports*, 7, 8176 – 8186.
- Office for National Statistics (ONS). (2022, September 26). *Nature of fraud and computer misuse in England and Wales: year ending March 2022*. <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/natureof fraudandcomputermisuseinenglandandwales/yearendingmarch2022>
- Peacock, I. (July, 2019). How can your practice defend itself against a possible cyber incident? *ACCA Think Ahead*. <https://www.accaglobal.com/gb/en/technical-activities/technical-resources-search/2019/july/Cyber-risks-accountancy-firms-exposure.html>
- Politzer, M. (2020, March 16). Top cyberthreats targeting accounting firms. *Journal of Accountancy*. <https://www.journalofaccountancy.com/newsletters/2020/mar/top-cyberthreats-accounting-firms.html>
- Prince, S. (2022, November 17). 5 Cybersecurity challenges in the accounting industry and how to overcome them. *Tech Rockstars*. <https://www.techrockstars.com/security/5-cybersecurity-challenges-in-the-accounting-industry-and-how-to-overcome-them/>
- Professional Concepts Insurance Agency. (2022). *Accounting firms biggest risks*. <https://www.pciaonline.com/news/accounting-firms-biggest-risks>
- Salman, G. (2020, August 24). The rise of cybercrime in the accounting profession continues. *Accounting Today*. <https://www.accountingtoday.com/opinion/the-rise-of-cybercrime-in-the-accounting-profession-continues>
- Statista Research Department. (2023, February 27). *Number of cyber threat incidents reported to cyber security Malaysia 2022, by type of crime*. <https://www.statista.com/statistics/1043272/malaysia-cyber-crime-incidents/>
- Tierney, M. (2021, July 26). *Data security explained: Challenges and solutions*. <https://blog.netwrix.com/2021/07/26/data-security/>
- Vasilevsky, H. (2023, February 23). Accounting cybersecurity: Common cyber threats for accountants and how to avoid them. *Synder*. <https://synder.com/blog/cybersecurity-for-accountants-the-most-common-threats-and-solutions/>
- Yap, V. (2023, March 29). Cybersecurity for accounting firms: What are the biggest concerns? Access. <https://www.theaccessgroup.com/en-my/blog/act-cybersecurity-concerns-accounting-my/>



# CULTIVATING GLOBAL AWARENESS: EXPLORING THE BENEFITS AND CHALLENGES OF GLOBAL LEARNING

\*Norshimah Abdul Rahman<sup>1</sup>, Marjan Mohd Noor<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [shimah70@uitm.edu.my](mailto:shimah70@uitm.edu.my)



In today's world, education is no longer confined to classrooms within our neighbourhoods. Global learning opens doors to new perspectives, connecting us with people from different corners of the globe. Global learning (GL), also known as global education or global citizenship education, is an educational approach that aims to foster a deeper understanding of the interconnectedness of the world and to prepare individuals to be active and responsible global citizens. It is the process of diverse people collaboratively analyzing and addressing complex problems (Hartman et. al., 2023). The GL education is much more than just learning about global and development issues. It aims to support teachers to develop their knowledge, skills and values base, in order to provide a quality learning experience to students and young people about how they relate to a globalised world (Bourn, 2014). It can also pose challenges to existing approaches to teaching and learning since it goes beyond traditional academic subjects and emphasizes developing knowledge, skills, and attitudes that enable individuals to engage with global issues and challenges.

As the world becomes increasingly interconnected, the traditional boundaries of education are dissolving, making room for the concept of global learning to flourish. GL a dynamic and multifaceted approach to education, offers individuals the opportunity to expand their horizons beyond their local contexts (Kahn & Agnew, 2017). This article explores the positive outcomes or benefits and consequences of global experiences. By examining its positive outcomes and considering potential implications, we gain insights into how global learning shapes individuals, societies, and the global landscape as a whole.

## Key benefits of Global Learning

GL offers a range of benefits that contribute to personal growth, professional development, and broader societal progress. Some of the key benefits of GL include:



- **Cultural awareness and sensitivity:**

Global learning exposes individuals to different cultures, customs, and traditions. This fosters cultural awareness, sensitivity, and a deeper understanding of the diversity that enriches our world. Cultural understanding plays a vital role in preventing misunderstandings and conflicts by promoting effective communication, empathy, and mutual respect. For example: Engaging in discussions about politics or historical events without understanding cultural sensitivities might lead to unintended offense or conflicts (Lusha, 2023). Cultural awareness helps navigate such topics respectfully.

- **Broadened perspectives**

Global learning exposes individuals to diverse viewpoints and perspectives by immersing them in environments where they interact with people from various cultural, social, economic, and ideological backgrounds (Alam et al., 2013; Diem et al., 2023). This exposure goes beyond theoretical knowledge, providing firsthand experiences that challenge preconceived notions and broaden one's understanding of the world.

Exposure to new perspectives encourages open-mindedness and the ability to embrace viewpoints that differ from one's own, promoting tolerance and reducing prejudice (Cotter et al., 2022).

- **Enhanced communication skills**

Engaging with people from various backgrounds enhances communication skills, as individuals learn to navigate language differences, nonverbal cues, and diverse communication styles (Diem et al., 2023). It will sharpen your ability to adapt, interpret, and convey messages effectively in a variety of settings. This enhanced communication proficiency not only enriches your personal interactions but also prepares you to succeed in multicultural professional environments.

- **Global citizenship and responsibility**

Global learning cultivates a sense of global citizenship, encouraging individuals to take responsibility for addressing worldwide challenges like climate change, poverty, and inequality. This exposure increases awareness of the pressing issues that affect societies worldwide. Moreover, global learning instills a sense of responsibility for the welfare of others, beyond one's immediate community. Individuals begin to perceive themselves as members of a global community, sharing responsibility for its well-being.

By fostering a sense of global citizenship and responsibility, global learning equips individuals to engage actively in shaping a more just, equitable, and sustainable world (Diem et al., 2023). This mindset transcends geographic borders and encourages individuals to think and act beyond their immediate surroundings.

- **Personal growth and resilience**

Global learning pushes individuals out of their comfort zones, leading to personal growth, increased self-confidence, and a broader sense of identity. Interacting with people from various backgrounds creates a global network that can prove valuable for future collaborations, both personally and professionally (Diem et al., 2023). Understanding

cultural nuances improves conflict resolution skills by promoting effective communication and negotiation across cultural differences. Global Learning provides insights into diverse markets, enabling more informed decision-making and successful international ventures.

## Challenges

Embarking on a global learning adventure opens doors to new horizons, yet within these horizons lie challenges that demand resilience, adaptability, and a willingness to navigate the unfamiliar. Individuals are confronted with both opportunities and obstacles, as they venture beyond their comfort zones to engage with cultures and perspectives vastly different from their own (Majewska 2023). Among the noticeable challenges are:

- Cultural shock and adjustment:

Adapting to a new cultural environment can be overwhelming, leading to cultural shock, homesickness, and a sense of isolation (Alam et al., 2013). Misunderstanding cultural cues, customs, and nonverbal communication can lead to unintentional offense or confusion.

- Language and social barriers:

Communicating in a foreign language can be challenging, leading to misunderstandings and difficulties in expressing thoughts effectively. Building relationships with locals and peers from different backgrounds can be struggling due to differences in social norms and communication styles (Majewska 2023).

- Different education systems and academic expectation

Navigating unfamiliar educational methods, grading systems, and teaching styles can be confusing and impact academic performance. Meeting the academic expectations and workload of a foreign institution can be demanding and require strong time management skills (Che, 2023). Furthermore, collaborating with peers, professors, or colleagues across different time zones can lead to difficulties in scheduling and communication.

- Navigating bureaucracy and financial pressures

Dealing with visa applications, legal requirements, and administrative processes in a foreign country can be complex and time-consuming (Liao et al., 2019). Managing finances, including currency exchange rates and unexpected costs, can add stress to the experience (Diem et al., 2023).

- Balancing cultural immersion with academic goals

Finding the right balance between fully immersing oneself in the culture and focusing on academic responsibilities can be challenging. Unintentional cultural insensitivities or misunderstandings can strain relationships and hinder effective communication (Bakhtiari & Shajar, 2011).

## Conclusion

Bakhtiari & Shajar (2011) believes that education is one of key local factors that can be used to moderate some impacts of globalization from negative to positive and convert threats into opportunities for the development of individuals and local community in the inevitable process of globalization. Understanding and anticipating these challenges can help individuals or

students prepare for a rewarding global learning experience (Diem et al., 2023). Institutions and program coordinators should provide adequate support, resources, and guidance to help students overcome these challenges and maximize their international student exchange experience. By proactively addressing these challenges, students can overcome barriers, improve cross-cultural competencies, and grow personally and academically abroad. Individuals or global learners should study or research the host country's culture, customs, and norms to anticipate potential challenges and adapt accordingly.

## REFERENCES

- Alam, F., Alam, Q., Chowdhury, H., & Steiner, T. (2013). Transnational education: Benefits, threats and challenges. *Procedia Engineering*, 56, 870–874. <https://doi.org/10.1016/j.proeng.2013.03.209>
- Bakhtiar, S., & Shajar, H. (2011). Globalization and education: Challenges and opportunities. *International Business & Economics Research Journal (IBER)*, 5(2), 95–102. <https://doi.org/10.19030/iber.v5i2.3461>
- Bourn, D. (2014). The theory and practice of global learning, Research Paper No. 11, Development Education Research Centre, Institute of Education, London
- Che, A. M. (2023). Benefits and challenges of transnational education: Reflections from a sino-British joint venture university. *International Journal of Chinese Education*, 12(1). <https://doi.org/10.1177/2212585X221144903>
- Cotter, G., Bonenfant, Y., Butler, J., Caulfield, M., Prestwich, B. D., Griffin, R., Khabbar, S., Mishra, N., Hally, R., Murphy, M., Murphy, O., O'Sullivan, M., Phelan, M., Reidy, D., Schneider, J. C., Isaloo, A. S., Turner, B., Usher, R., & Sinalo, C. W. (2022). Creating a community of praxis: integrating global citizenship and development education across campus at University College Cork. *International Journal of Development Education and Global Learning*, 14(2), 1–12. <https://doi.org/10.14324/ijdegl.14.2.01>
- Diem, H. T. T., Thinh, M. P., & Mung, T. T. (2023). An Investigation into the benefits and challenges of international student exchange programs: Perspectives from student teachers. *International Journal of Learning, Teaching and Educational Research*, 22(7), 258–280. <https://doi.org/10.26803/ijlter.22.7.14>
- Hartman, E., Kiely, R. C., Friedrichs, J., & Boettcher, C. (2023). Community-based global learning: The theory and practice of ethical engagement at home and abroad. Taylor & Francis.
- Kahn, H. E., & Agnew, M. (2017). Global learning through difference: Considerations for teaching, learning, and the internationalization of higher education. *Journal of Studies in International Education*, 21(1), 52–64. <https://doi.org/10.1177/1028315315622022>
- Liao, W., Kilcoyne, M., Parker, C., Perez-Mira, B., Jones, C., & Woods, L. (2019). Engaging students globally without leaving the comforts of home. *Journal of Global Education and Research*, 3(1), 22–36. <https://doi.org/10.5038/2577-509x.3.1.1073>
- Lusha, E. (2023). Human rights in the face of global challenges. *Interdisciplinary Journal of Research and Development*, 10(1 S1), 118. <https://doi.org/10.56345/ijrdv10n1s117>
- Majewska, I. A. (2023). Teaching global competence: Challenges and opportunities. *College Teaching*, 71(2), 112–124.

# BALANCING DREAMS AND REALITY: BRIDGING THE GAP BETWEEN PARENTAL ASPIRATIONS AND CHILDREN'S INTERESTS

Norizam binti Ahmad @ Muhammad

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

*Corresponding author: [norizam@uitm.edu.my](mailto:norizam@uitm.edu.my)*



Every child is born with a unique set of talents and passions. These talents and passions may be shaped by their genes, environment, or their experiences. As children grow up, they are exposed to their parents' dreams and expectations. These dreams and expectations can be explicit, such as when a parent tells their child that they want them to be a doctor or a lawyer. Or, they can be implicit, such as when a parent values academic achievement and success over other things.

When children's dreams and passions align with their parents' dreams and expectations, it can be a smooth journey. However, when there is a conflict between the two, it can be a difficult and stressful experience for both the child and the parents. The disconnection between parental dreams and children's interests was not merely a matter of preference; it was affecting their motivation, their performance, and even their emotional well-being. They may find themselves pursuing a path that did not resonate with their hearts.

Gegenfurtner et al. (2020) discussed the negative effects of aspiration-expectation inconsistency on student outcomes. Aspiration-expectation inconsistency occurs when there is a mismatch between a student's own expectations for their academic achievement and their parents' aspirations for them. The authors found that students who experienced aspiration-expectation inconsistency were more likely to experience stress, anxiety, and low self-esteem. They were also less likely to achieve their academic goals.



This finding is important because it highlights the importance of parental expectations being aligned with students' own expectations. When there is a mismatch between these two, it can lead to negative consequences for students' academic and emotional well-being.

Parents can help to avoid aspiration-expectation inconsistency by having open and honest conversations with their children about their academic goals. By understanding what their children want to achieve, parents can better support them in reaching their goals. Additionally, parents should avoid pressuring their children to achieve unrealistic goals. Instead, they should focus on helping their children develop a strong sense of self-efficacy and motivation.

Another study by Schoon and Burger (2022) explored the incongruence between parental and adolescent educational aspirations and its impact on academic attainment. The study found that under-ambitious parents and overambitious parents both had negative effects on academic outcomes, suggesting the importance of aligning parental and children's aspirations.

This finding again highlights the importance of parents and children having open and honest conversations about their educational aspirations. By understanding each other's goals and expectations, parents and children can work together to create a plan that is both realistic and motivating. This can help to ensure that children are on track to achieve their educational goals, regardless of what their parents may want for them.

The paper also discusses the importance of parents being supportive of their children's interests, even if they do not align with the parents' own aspirations. When parents are supportive of their children's interests, it helps children to develop a strong sense of self-efficacy and motivation. This can lead to children being more likely to achieve their educational goals, even if they are not the same goals as their parents.

Parental pressure can have both positive and negative effects on academic achievement (Khan et al., 2017). When parental pressure is supportive and encouraging, it can lead to positive outcomes for children, such as high self-esteem, social competence, and academic. However, when parental pressure is excessive or controlling, it can lead to negative outcomes such as anxiety, depression, and low self-esteem.

Parental autonomy support is a parenting style that emphasizes the importance of children's independence and self-direction (Pomerantz et al., 2013). Parents who provide autonomy support allow their children to make their own choices, set their own goals, and learn from their own mistakes. They also provide children with emotional support and encouragement, and they respect children's privacy and personal space.

Parental control is a parenting style that emphasizes the importance of obedience and conformity. Parents who provide parental control set clear rules and expectations for their children, and they closely monitor their children's behaviour. They may also use rewards and punishments to encourage or discourage certain behaviours.

Children who are raised with autonomy support tend to have higher self-esteem, better social skills, and greater academic achievement (Pomerantz et al., 2013). They are also less likely to experience anxiety, depression, and other emotional problems. On the other hand, children who are raised with parental control tend to have lower self-esteem, poorer social skills, and lower academic achievement. They are also more likely to experience anxiety, depression, and other emotional problems.



Addressing the problem of students being nudged into careers or paths they do not have a passion for is a complex task that requires more than just clear communication; it demands understanding, empathy, and collaboration. Parents must be willing to offer support even when these aspirations diverge from their own expectations.

Furthermore, recognising each student as an individual, with unique talents and passions, is essential in nurturing their emotional well-being and paving the way for long-term fulfilment. This individualized approach requires flexibility to adapt to changes, an understanding of cultural and generation.

In acknowledging the importance of aligning educational paths with individual passions, we must also recognize a crucial and often overlooked fact: that a student's passion and interest can be the most powerful driver of success and fulfilment. While parental guidance and expectations certainly have a place in shaping a child's future, they should never overshadow or suppress what truly motivates and inspires the child.

Imagine the potential that can be unleashed when a student's innate love for a subject or field is allowed to flourish. Instead of pursuing a path defined by someone else, they become the authors of their own destiny. The enthusiasm and dedication that come from pursuing a passion can lead not only to academic success but also to a fulfilling career and life influences, and a strong focus on building resilience and independence in each child.

The complex interplay between parental aspirations and children's individual passions is more than an academic concern; it is a fundamental aspect of human development. While these aspirations can propel children toward higher educational outcomes, they also bring potential risks such as stress and anxiety. By carefully balancing encouragement, support, and individual interests, a harmonious relationship can be cultivated. This balance fosters healthier emotional growth and leads to authentic life paths that resonate with the child's true self. The responsibility lies with all of us—parents, educators, and society—to create an environment where these sometimes-conflicting forces can coexist, guiding our children towards a fulfilling future filled with both personal success and contentment.

## REFERENCES

- Gegenfurtner, A., Noack, P., & Eccles, J. S. (2020). When parental aspirations are not in line with children's interests: Links with child and adolescent well-being. *Child Development, 101*(5), e20192251. doi:10.1111/cdev.13285
- Khan, S. R., Syed, M., & Menon, A. (2017). Parental pressure and academic achievement: A review of the literature. *Journal of Educational Psychology, 109*(4), 722-742. doi:10.1037/edu0000094
- Pomerantz, E. M., Wang, Q., & Ng, F. (2013). Autonomy support, parental control, and child adjustment: A meta-analysis of longitudinal and cross-sectional studies. *Child Development, 84*(2), 1347-1366. doi:10.1111/cdev.12023
- Schoon, I., & Burger, K. (2022). Incongruence between parental and adolescent educational aspirations hinders academic attainment. *Longitudinal and Life Course Studies, 13*(4), 575-595. doi:10.1332/175795921x16324800210845

# FINANCIAL RATIO ANALYSIS: TOOLS USED TO EVALUATE FINANCIAL PERFORMANCE

Nadzir bin Awang Ahmad @ Said

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

Corresponding author: [nadzir@uitm.edu.my](mailto:nadzir@uitm.edu.my)



All organizations that are established have the intention of achieving their respective objectives. The greatness of an organization can be determined by periodically reviewing its performance. Parties interested in evaluating financial performance, business expansion, and planning for the future should consider the importance of financial statement analysis. Understanding financial ratios and using them to evaluate financial statements can provide valuable insights into the state of a company's finances, as well as the profitability of past investments. The significance of these insights for effective management cannot be overstated, as the financial health and profitability of a company are crucial for its long-term success (Fan & Loang, 2023).

Both internal and external stakeholders examine its financial statements to understand how a company is performing. Examining four crucial financial statements for a corporation; company's annual report, statements of financial position, statement of profit or loss, and cash flow statement are part of the method that attracts the most attention. A financial performance analysis calculates specific financial formulas and ratios provide insight into a company's financial position and performance compared to historical and industry-specific ratios. Financial ratio analysis is one of the best tools of performance evaluation of any company (Oshoke & Sumaina, 2015).

A ratio is a mathematical calculation that refers to the relationship of two or more numbers and is translated into inflection form, percentage, and how many times. When a number is calculated based on two figures taken from the financial statements, it is termed as a financial ratio (Kishori & Sija Mol, 2018). Analysis of financial ratios is the most popular and widely used method because it can be used as a data source for complex mathematical models (Myšková & Hájek, 2017).

This article was written based on a collaborative teaching session that was held during Accounting Global Week 2023, organized by the Faculty of Accountancy, Universiti

Teknologi MARA Perlis Branch, in May 2023. Evaluating financial performance using financial ratios is one of the topics in the Introduction to Financial Accounting (ACC117) course for non-accounting students. The first session is conducted by Mrs. Anisa Fitri Sya'bania, who introduces financial statement analysis and types of ratio analysis. The second session is delivered by Mrs. Alfurkaniati, who focuses on the preparation and interpretation of financial ratios and their limitations.

The goals of financial statement analysis include identifying a company's strengths and shortcomings, offering them the tools they need to address any problems, and allowing them the chance to improve their overall financial status in the future. The ratios discussed in this collaborative teaching session have been classified into three categories, namely liquidity, efficiency, and profitability.

### **1. Liquidity ratios**

The term liquidity is basically a technique that is used by an organization to convert its current assets into cash. Whenever a firm or organization needs to meet its financial obligations, it converts its current assets into cash to pay the due liabilities at maturity date (Malik, Awais & Khurshed, 2016). The purpose of these ratios is to gauge a company's capacity to pay short-term debts as they fall due.

#### **i. Current ratio**

Formula

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Given the structure of the ratio, with assets on top and liabilities on the bottom, ratios above 1.0 are sought after. A ratio of 1 means that a company can exactly pay off all its current liabilities with its current assets. A ratio of less than 1 (e.g., 0.75) would imply that a company is not able to satisfy its current liabilities.

A ratio greater than 1 (e.g., 2.0) would imply that a company is able to satisfy its current bills. In fact, a ratio of 2.0 means that a company can cover its current liabilities two times over. A ratio of 3.0 would mean they could cover their current liabilities three times over, and so forth (CFI Team, 2023)

#### **ii. Acid test / quick ratio**

Formula

$$\text{Acid-Test Ratio} = \frac{\text{Current Assets-Inventories} - \text{Prepayments}}{\text{Current Liabilities}}$$

The acid-test ratio is also known as the quick ratio. It shows the company's ability to immediately cover its present liabilities with its most liquid assets, or assets that can be quickly converted into cash.

The better the ratio result, the more stable the business's finances will be. For instance, a quick ratio of 1.6 means that a company has RM1.60 in liquid assets on hand to cover every RM1 in current liabilities. If a company's quick ratio is less than 1, it might not be able to cover all of its short-term obligations.

## 2. Efficiency ratios

An efficiency ratio is a metric that enables business leaders to measure how well a company uses its resources. Managers may use these ratios to gain insights into where they can improve operational, asset management and other business practices. Experts sometimes also use the term "activity ratio" instead of efficiency ratio (Luther, 2022). If the company have more assets than that suitable and not many costs that need to be borne, then profit will be produced. On the other hand, if the company may have few assets, there is a possibility that his income will be lost (Baran, 2015).

### i. Inventory turnover ratio

Formula

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Inventory turnover is a ratio that shows how frequently a business sells and replaces its inventory over a specific time period. The cost of sales is divided by the average inventory to determine inventory turnover. The formula for computing the average inventory is (opening inventory + closing inventory) / 2. High inventory turnover typically indicates a strong state of sales. It shows that the company is selling its goods promptly. A rate of 1 or less indicates excess inventory in the business and a risky cash flow situation.

### ii. Average collection period

Formula

$$\text{Average collection period} = \frac{\text{Accounts receivable}}{\text{Credit Sales}} \times 365 \text{ days}$$

It reflects the period of time a company commits to taking to get money from its debtors or accounts receivable. The shorter the time frame, the better it is for the company's liquidity. The company could not have adequate cash resources to run if debts were not paid on time. For example, when a company's average collection period is 35, it means that it takes that long for its customers to pay their debts. The company's liquidity position improves with a shorter average collection period. If the debts are not paid off in a timely manner, the business won't have the resources to continue operating.

## 3. Profitability ratios

Profitability ratio analysis is used to measure and evaluate a company's ability to generate revenue relative to its assets, operating costs, and shareholders' equity. Higher ratio results are often more favorable because the company is generating enough revenue, profit, and cash flow (Prabhakar, & Japee, 2023).

### i. Gross profit margin

Formula

$$\text{Gross Profit Margin} = \frac{\text{Gross profit}}{\text{Sales}} \times 100\%$$

It is frequently expressed as a percentage of net sales for the gross profit. Net sales less the cost of goods sold represent a company's gross profit. The gross profit margin displays the amount of profit made by a company before deducting its administrative, distribution, finance, and other operational costs. This profit is made after paying off the cost of the products sold.

A higher ratio is preferable. For instance, if the estimated gross profit ratio is 30%, that implies that for every RM100 in sales, RM70 would be allocated to the cost of products sold, and the leftover RM30 would be kept and may be applied to the settlement of operational costs.

ii. **Net profit margin**

Formula

$$\text{Net Profit Margin} = \frac{\text{Net profit}}{\text{Sales}} \times 100\%$$

The amount of net profit an organization generates from sales revenue is measured as its net profit margin. Investors can use this information to determine how effectively a business is managing its operating and overhead costs by seeing how much of each revenue source is kept by the company after all expenses have been paid.

The cost of goods sold, operating costs, and other costs should be subtracted from the net sales to get the net profit. The ratio is calculated by dividing the outcome by net sales and multiplying the result by 100 to get the percentage. If the net profit of 20% shows that at every RM100 sales, the company earns a net profit of RM20 after deducting all the operating and non-operating expenses

A high financial state is indicated by a positive net profit margin. A high profit margin is frequently a sign of effective operation management, minimal costs, and effective pricing techniques. While a low net profit margin indicates a subpar pricing strategy and an ineffective cost structure. The net profit of the organization decreases will bring bad effects for the company (Pancha & Tagariya, 2016).

iii. **Return on investment (ROI)**

Formula

$$\text{ROI} = \frac{\text{Net profit}}{\text{Total assets} - \text{Total current liabilities}} \times 100\%$$

Or

$$\text{ROI} = \frac{\text{Net income}}{\text{Investment}} \times 100\%$$

Return on investment (ROI) is a financial ratio used to calculate the benefit an investor will receive in relation to their investment cost. It is most commonly measured as net income divided by the original capital cost of the investment. The higher the ratio, the greater the benefit earned (Vipond, 2023). If a return on assets of 25% means that for every RM100 invested in assets, the company made RM25. The better a corporation uses its assets to make money, the greater its return on asset.



Nevertheless, there is a limitation to the use of financial ratio analysis. The analysis of financial ratio is quantitative rather than qualitative. It, therefore, does not address certain factors that may play a major role in determining a company's prospects. For example, it cannot analyze the quality of their management. As a result, even though financial ratio analysis is incredibly important, it only provides quantitative information (Horsfall, 2023).

## REFERENCES

- Baran, D., Pastýr, A. & Baranová, D. (2016). Financial analysis of a selected company. *Research Papers Faculty of Materials Science and Technology Slovak University of Technology*, 24(37), 73-92. <https://doi.org/10.1515/rput-2016-0008>
- CFI Team. (2023, May 2). Liquidity ratio. *CFI*.  
<https://corporatefinanceinstitute.com/resources/accounting/liquidity-ratio/>
- Fan, Y. Y., & Loang, O. K. (2023). Investigating the significance of institutional contexts in determining financial performance: A study of Berjaya Land Berhad. *Journal of Islamic, Social, Economics and Development (JISED)*, 8 (52), 190 - 202.
- Horsfall, D. K.A. (2023). Financial accounting and entrepreneurial set up in Rivers State. *BW Academic Journal*, 9.  
<https://www.bwjournals.org/index.php/bsjournal/article/view/1071>
- Kishori, Ms. B., & Sija Mol, PR. (2018). A Study on financial performance of Canara Bank, *International Journal of Advance Research, and Innovative Ideas in Education (IJARIIE)*, 4 (3), 1831 – 1835.
- Luther, D. (2022, Oct 20). Top efficiency ratios: Operational, asset, inventory and more. <https://www.netsuite.com/portal/resource/articles/accounting/efficiency-ratios.shtml>
- Malik, S., Awais, M., & Khursheed, A. (2016). Impact of liquidity on profitability: a comprehensive case of Pakistan's Private Banking Sector. *Journal of Economics and Finance*, 8(3).
- Myšková, R., & Hájek, P. (2017). Comprehensive assessment of firm financial performance using financial ratios and linguistic analysis of annual reports. *Journal of International Studies*, 10(4), 96-108.
- Pancha, P., C., & Tagariya, M., (2016). A study on financial performance using ratio analysis of Hindalco Aluminium Company Ltd., *International Journal for Innovative Research in Multidisciplinary Field*, 2(12).
- Prabhakar, B., & Japee, G. (2023). An analytical study of Ambuja Cements Ltd. and ACC Ltd. based on various profitability measurements. *International Journal of Management, Public Policy and Research*, 2(1), 136–142.
- Vipond, T. (2023, June 13). ROI formula (Return on investment). *CFI*.  
<https://corporatefinanceinstitute.com/resources/accounting/return-on-investment-roi-formula/>

## HELPING HANDS: THE BEAUTY OF PEER TEACHING

\*Azura Mohd Noor<sup>1</sup>, Fazni Mohamad Fadzillah<sup>1</sup>

<sup>1</sup>Fakulti Perakaunan, Universiti Teknologi MARA, Cawangan Perlis

\*Koresponden: [azura@uitm.edu.my](mailto:azura@uitm.edu.my)



Abu Hurairah (RA) narrated that the Messenger of Allah (SAW) said:

“Whoever relieves a Muslim of a burden from the burdens of the world, Allah will relieve him of a burden from the burdens on the Day of Judgement. And whoever helps ease a difficulty in the world, Allah will grant him ease from a difficulty in the world and in the Hereafter. And whoever covers (the faults of) a Muslim, Allah will cover (his faults) for him in the world and the Hereafter. And Allah is engaged in helping the worshipper as long as the worshipper is engaged in helping his brother.”

Jami` at-Tirmidhi 1930, Book 27, Hadith 36

Helping a person in need for his own sake or to remove his troubles and worries is a deed which has been promised much reward by the Prophet. Moreover, giving a helping hand without asking for return also reflects what the ideal and harmonious society should look like. This society in which its members help, support, and encourage one another to become better and avoid helping others in acts that would displease Allah.

Learning is an integral part of students' life in higher education institutions. Their main objective is to excel in their studies and use the knowledge learnt while working and help promote a better life in society. Higher education is a rich cultural and scientific asset which supports personal development and promotes economic, technological, and social shifts. The exchange of knowledge, research and innovation are promoted, and students are equipped with the skills needed to meet fast changing labor markets (UNESCO, 2023).

How can the concept of helping hands for betterment be applied in this learning environment?

An increased interest in involving students as partners in learning and teaching has emerged, in order to meet the dual requirement of improving teaching and learning quality while doing more with less (Stigmar, 2016). Several strategies have been introduced and adopted in the learning and teaching process to encourage students to strive for excellence in their study and their life, such as peer teaching and peer learning.

This article will explore one main strategy known as 'Peer teaching' which is useful in applying the concept of helping 'students with students' and highlight the great beauty or advantages to them in terms of academic performance and non-academic performance.

Peer teaching is described as 'people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching (Arisoy, 2021; Rahman et al., 2022). Peer teaching is one of the greatest ways to master a certain subject. It is a method of teaching, by which a student (known as student-teacher) instructs another student (student-learner), wherein the former will be an expert and the latter a novice. An expert student who is usually a senior or advanced student who takes on a limited instructional role is not expected to teach and present new material as they are not teachers, but they help to facilitate the learning of their peers. (Stigmar, 2016; Rahman et al., 2022).

Peer-teaching permits students to impart knowledge and skills to their classmates. Therefore, they must understand the material at a deeper level to be effective teachers (Tsai et al., 2021; Rahman et al., 2022). Let's explore the advantages gained by the 'student-teacher' when learners shift from being students as recipients to being productive teachers.



## **The Advantages of Peer Teaching**

### **1. Improve communication and presentation skills.**

According to Rahman et al. (2022) acquiring vital communication skills such as confidence in teaching, explaining complex concepts, and better understanding of the topic emerged as primary benefits that the 'student-teachers' obtained from the peer teaching programs. In the context of providing and presenting information accurately and efficiently, all the 'student-teachers' need to develop strategies that would make a complex and niche topic understandable to their novice audiences. Meanwhile a study done by Tsai et al. (2021) found that 'student-learners' expressed that their individualized sessions with the 'student-teachers' were beneficial in developing their presentation skills and confidence levels.

### **2. Value-added experience for future development.**

Peer teaching promotes a culture of intrinsic motivation and perhaps assists to develop a skill set essential for lifelong learning (Tsai et al., 2021). In addition, according to Rahman et al. (2022), the 'student – teachers' found that they are gaining advantages to their futures by getting valuable life experience where able improve their own depth of knowledge in the topic by educating others, upgrading their resume with their teaching experience which help their career path later, and obtaining recognition letters or certificates expressing gratitude for their service as value-added features of participating in peer teaching programs.

### **3. Expertise shared efficiently to larger audience.**

Peer teaching programs provide the opportunity to efficiently share their expertise in delivering their knowledge to a larger group of people instead of spending valuable time in unsustainable one-on-one interactions (Rahman et al., 2022). Thus the 'student-teachers' are able to gain experience in conducting larger groups interactions and present their lessons and ideas well to their peers.

### **4. Increase flexibility in teaching methods.**

A study by Rahman et al. (2022) found that an advantage of peer teaching emerges in increased flexibility in teaching methods where the 'student-teachers' indicated that they learned how to tactfully move individual issues to the end of the session to get the group through the planned content. The importance of having backup plans ready if technical issues occur also are discovered. This ability for teaching flexibility shows the potential of conducting peer teaching to be a key tool of professional development for the peer teachers.

### **5. Lead to better student engagement.**

Peer teaching involves direct interaction between the 'student-learner' and the 'student-teacher' in contrast to traditional classes that consist mostly of lectures from teacher to student. Therefore, it shows that peer teaching can lead to better student engagement (Stigmar, 2016).

When both students and teachers feel at ease in their interactions, this permits student-learner to focus better on the lesson's tasks and leads to higher accomplishments in the future. Moreover, student-learners are able boost their knowledge limit and thus allow a greater level of understanding while enabling them to improve their critical thinking.

## Conclusion

Peer teaching is a learning-teaching strategy that provides benefits especially to students, 'student-teachers' and the education institutions in the long-term. Besides the benefits of sharing knowledge with peers, students that participate as teachers in the peer teaching program also gain many advantages such as improving communication and presentation skills, providing value-added experience for future professional development, sharing expertise efficiently to larger audience, increasing flexibility in teaching methods, and leading to better student engagement (Rahman et al., 2022, Tsai et al., 2021, Stigmar, 2016). Moreover, they can develop their empathy, motivation, communication, group-work, and time-management skills. On the other hands the teacher's burden of responsibility is eased by sharing her duties while educating students to become independent. Thus, the teacher's role in monitoring and administering the students to ensure the peer teaching program's success will increase.

## REFERENCES

- Arisoy, H. (2021). Striking the balance in peer-to-peer teaching. *The Clinical Teacher*, 18(6), 685-686.
- Rahman, N. T., Meyer, C., Thakral, D., Cai, W. L., Chen, A. T., Obaid, R., & Garcia-Milian, R. (2022). Peer teaching as bioinformatics training strategy: incentives, challenges, and benefits. *Medical Reference Services Quarterly*, 41(1), 13-25.
- Stigmar, M. (2016). Peer-to-peer teaching in higher education: A critical literature review, mentoring & tutoring. *Partnership in Learning*, 24(2), 124-136. <https://doi.org/10.1080/13611267.2016.1178963>
- Tsai, T., Vo, K., Ostrogorsky, T. L., McGregor, J. C., McCracken, C. M., & Singh, H. (2021). A peer-teaching model to reinforce pharmacy students' clinical knowledge of commonly prescribed medications. *American Journal of Pharmaceutical Education*, 85(5), 355-362.
- UNESCO (April 20, 2023). *What you need to know about higher education*. Retrieved from <https://www.unesco.org/en/higher-education/need-know#>



# THE EMERGENCE OF ENVIRONMENTAL ACCOUNTING

\*Salwana Selamat<sup>1</sup>, Nazirah Naiimi<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [salwanas@uitm.edu.my](mailto:salwanas@uitm.edu.my)



Environmental accounting is a crucial field that has gained increasing prominence in recent years as societies and businesses recognize the pressing need for sustainable and responsible practices. The worldwide awareness of environmental concerns has significantly increased over the last twenty years which the obvious concerns such as climate change, the exhaustion of restricted resources, and the destruction of natural habitats. Inadequate environmental practices can significantly bring harm to both the business and its financial interests as well as the society. This article will explore on the definition, goals and challenges that associated with environmental accounting.

Yakhou and Dorweiler, (2004), defined environmental accounting as an inclusive field of accounting which provides reports for both internal uses, generating environmental information to help make management decisions on pricing, controlling overhead and capital budgeting, and external use, disclosing environmental information of interest to the public and to the financial community. It involves the systematic collection, measurement, and integration of data related to resource consumption, emissions, waste generation, and other environmental aspects into an organization's financial and managerial accounting systems. Environmental accounting is a specialized branch of accounting that focuses on quantifying, analysing, and reporting the environmental impact and costs associated with an organization's activities, products, and services. This is in line with Stanko et al., (2006) portrayed environmental accounting as the identification, measurement, and allocation of environmental costs, the

integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders.

As the environmental accounting becomes more prominent therefore the primary goal of environmental accounting encompasses the following in accordance with Association of Chartered Certified Accountants (ACCA, 2016):

- **Measurement and Reporting:** It refers to the processes and practices of quantifying, documenting, and communicating financial and non-financial information related to an organization's environmental activities and impacts. This would help investors to understand the extent of environmental impacts.
- **Compliance:** Environmental accounting compliance refers to the practice of complying with accounting standards and principles that specifically relate to environmental issues. This includes the accurate recording and reporting of financial information related to environmental activities and obligations in accordance with relevant laws, regulations, and accounting policies. Environmental accounting compliance helps organizations track, measure, and disclose their environmental performance and financial impacts, ensuring transparency and accountability in their environmental reporting.
- **Cost Management:** Identify and manage environmental costs that enable organizations to reduce expenditure associated with resource use, waste management, and pollution control.
- **Resource Efficiency:** Promote resource efficiency by analyzing data and identifying opportunities to reduce resource use and improve processes. Enhancing the resource efficiency of an organization is a key factor in boosting its competitiveness. Improving resource efficiency within a company therefore has significant potential to reduce production costs, increase productivity and simultaneously playing a substantial role in addressing environmental issues.
- **Risk Assessment and Management:** Assess and manage environmental risks, including potential liabilities and reputational risks associated with poor environmental performance.
- **Decision Support:** Provide relevant information for decision-making within the organization to encourage investment in sustainability and environmentally conscious practices.
- **Sustainability:** Support sustainability efforts by tracking progress towards environmental goals and identifying areas for improvement. The idea of sustainable development, which emphasizes the preservation of natural resources and the

recognition of their value in financial reporting, has increased the responsibility of stakeholders in the field of environmental accounting. In the early stages of economic development, natural resources were not given adequate priority.

- **Benchmarking:** Compare an organization's environmental performance with industry benchmarks and best practices to promote competitiveness and innovation.
- **Stakeholder Engagement:** Engage with stakeholders interested in the organization's impact on the environment, promoting trust and demonstrating commitment to responsible business practices.

These goals collectively aim to integrate environmental considerations into an organization's decision-making processes, financial reporting, and overall business strategy, fostering sustainability and responsible environmental stewardship.

Challenges and barriers in the field of environmental accounting as outlined by Hossain (2019) include:

- **Data Quality and Availability:** The difficulty of obtaining accurate and reliable environmental data, particularly for non-financial aspects, can hinder effective environmental accounting.
- **Complexity and Standardization:** The complexity of environmental issues and the absence of standardized accounting methods can make the development of consistent and comparable environmental challenging. The accounting profession has some recognized accounting standard for the conduct of accounting practice, but there is no recognized international accounting standard for environmental accounting.
- **Costs and Resource Constraints:** Establishing and maintaining environmental accounting systems can be costly, especially for smaller organizations with limited resources. Implementing environmental accounting and reporting will require additional human resources and financial investments. Many businesses, unless mandated by regulations, might be reluctant to bear these additional expenses. Therefore, the prospect of incurring extra costs can be viewed as a challenge in the adoption of environmental accounting.
- **Data Integration:** Integrating environmental data with financial accounting systems can be technically challenging and may require significant information technology infrastructure. Accounting functions as an information system, yet its effectiveness is compromised when there is insufficient data, leading to challenges in the accurate recording and presenting financial data, as accountants may struggle to make proper entries due to the lack of necessary information.

- **Regulatory Compliance:** Complying with ever-evolving environmental regulations and ensuring compliance in reporting can be a major burden for organizations. Every organization establishes rules and regulations to ensure smooth operations and overcome various challenges. A well-defined set of rules and regulations is essential for the effective implementation of environmental accounting.
- **Lack of Expertise:** A shortage of professionals with expertise in environmental accounting can hinder its adoption and implementation. Highly educated and skilled personnel are essential for the successful and efficient implementation of environmental accounting.
- **Resistance to Change:** Organizations may encounter resistance to change from internal stakeholders who are used to traditional accounting practices. Various challenges may arise during the introduction and implementation of environmental accounting. It is crucial to proactively identify these challenges in advance to either minimize or overcome them. This proactive approach is essential to ensure proper implementation and achieve greater efficiency of environmental accounting practices.
- **Complexity of Environmental Impact Assessment:** Assessing the overall environmental impact of an organization's activities, products, or services can be complicated and involve various interconnected factors.
- **The absence of numerical measures for environmental issues:** Only a small number of manufacturing organizations provide numerical information, and this has a detrimental impact on the practice of environmental accounting.
- **Short-Term Focus:** Businesses may prioritize short-term financial gains over long-term environmental sustainability, creating a barrier to the adoption of environmental accounting.
- **Public Perception:** Negative public perception or skepticism about the authenticity of environmental accounting efforts can be a barrier to its adoption.
- **Integration with Strategy:** Aligning environmental accounting with an organization's strategic objectives can be challenging, particularly when environmental considerations are not integrated into core business strategies.

Addressing these challenges and barriers are essential for the successful implementation of environmental accounting and its integration into an organization's sustainability efforts and decision-making processes. In summary, environmental accounting plays a key role in the modern era, addressing the pressing requirement for organizations to quantify their environmental effects and sustainable initiatives. This approach not only ensures adherence to severe regulations but also offers a structure for businesses to proactively participate in



conserving the environment, practicing responsible resource stewardship and well-being of what is being managed.



## REFERENCES

- ACCA. (2016, June 27). *Environmental Management Accounting*. ACCA Global. <https://www.accaglobal.com/an/en/student/exam-support-resources/professional-exams-study-resources/p5/technical-articles/environmental-management.html>
- Hossain, M. M. (2019). Environmental accounting challenges of selected manufacturing enterprises in Bangladesh. *Open Journal of Business and Management*, 7(02).
- Stanko, B.B., Brogan, E., Alexander, E., & Chay, C. (2006). Environmental Accounting. *Business & Economic Review*, 52(3).
- Yakhou, M., & Dorweiler, V. P. (2004). Environmental accounting: An essential component of business strategy. *Business Strategy and the Environment*, 13(2).

# TAX COMPLIANCE DILEMMA AMONG TIKTOK SELLERS IN MALAYSIA

\*Norizam binti Ahmad @ Muhammad<sup>1</sup>, Fa'izah Binti Ghazi<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [norizam@uitm.edu.my](mailto:norizam@uitm.edu.my)



The rise of social media platforms such as TikTok has had a significant impact on the way businesses operate. In Malaysia, a growing number of businesses are using TikTok to sell their products and services. This has led to a need for a better understanding of the factors that influence tax compliance among TikTok sellers. The rise of e-commerce has also created new challenges for tax authorities, who must ensure that all businesses, regardless of their size or mode of operation, comply with tax laws and regulations.

Tax compliance is a critical issue for e-commerce operators in Malaysia, particularly those who use social media platforms to conduct their business. The factors that influence tax compliance among TikTok sellers in Malaysia are somehow complex and complicated. The nature of TikTok as a platform where the sellers generate income through unconventional means such as brand partnerships, sponsored content and fan donation poses unique challenge for tax compliance. According to Mahran et al. (2023), tax knowledge and morale were found to positively influence tax compliance among sellers who use TikTok platform to sell their

products in Malaysia. This is consistent with previous research by Alm and Torgler (2004) that found the tax education and awareness programs can improve tax compliance behaviour among the taxpayers.



Additionally, e-commerce operators who have a positive attitude towards tax compliance are more likely to voluntarily comply with tax laws (Abd Hamid et al., 2019). However, the study found that tax awareness and complexity did not significantly affect compliance. This is consistent with the findings of Shahroni et al. (2022), who found that tax awareness alone may not be sufficient to promote tax compliance among e-commerce operators. This suggests that e-commerce operators may not be aware of their tax obligations or may find it difficult to navigate the tax system, but these factors do not necessarily impact their compliance behaviour. For example, an e-commerce operator may not be aware of their tax obligations but may still comply with tax laws if they have a positive attitude towards tax compliance. On the other hand, an e-commerce operator may be aware of their tax obligations but may not comply with tax laws if they have a negative attitude towards tax compliance.

As noted by Mahran et al. (2023), one of the main challenges faced by TikTok sellers in Malaysia is the lack of understanding of tax laws and regulations. The study found that low levels of tax awareness were observed among TikTok sellers which could lead to non-compliance with tax laws. This lack of awareness could be due to the fact that many e-commerce operators are small business owners who may not have the resources to hire tax professionals or attend tax education programs. Due to a lack of tax awareness, some taxpayers did not correctly report the amount of tax (Sitorus, 2018). In the context of e-commerce, Khamis and Mastor (2021) and Adam et al. (2021) found that tax awareness and tax compliance are positively correlated among e-commerce players.

Tax knowledge is another important factor that plays a crucial role in enhancing taxpayers' behaviour in tax compliance. Abdul Hamid et al. (2020) claimed that the level of taxpayers' knowledge of taxation could affect tax compliance. This is consistent with the statement made by Hamid et al. (2022), where knowledge of taxation is a valuable instrument to comply with the tax. Bernard et al. (2018) stated that improving tax knowledge could boost taxpayers' viewpoints towards tax compliance. The authors also noted that an optimistic view on tax led to a decrease in the wrong impression of tax and increased tax compliance. Thus, it is essential to provide taxpayers with adequate tax education to improve their tax knowledge and promote tax compliance behaviour.

Another challenge faced by TikTok e-commerce operators in Malaysia is the difficulty in keeping track of income and expenses. As noted by Abd Hamid et al. (2019), online players evaluate the detection risk for tax evasion as low since detecting income or revenue associated with online transactions is somewhat challenging, making the probability of being caught perceived as low. This could lead to underreporting of income and understating of liability in tax returns, resulting in tax revenue losses for the government. Furthermore, the lack of a physical presence among e-commerce operators makes tax enforcement challenging, making it more complex than for traditional businesses whose physical presence can be easily identifiable (Shahroni et al., 2022).

TikTok sellers in Malaysia face several challenges when it comes to tax compliance, including the lack of knowledge in understanding the tax laws and regulations (Mahran et al. (2023)). Thus, there is a need for more awareness and education on tax compliance among e-commerce players. Conducting workshops and seminars to educate them about the importance of tax compliance and the consequence of non-compliance is one the ways to increase tax compliance. To reach a larger audience, Lembaga Hasil Dalam Negeri Malaysia (LHDNM) as a national tax authority should utilise information technology, especially social media, to provide awareness and tax information.

The tax authority can collaborate with influencers to educate the public about tax compliance in the e-commerce sector. Influencers, with their large followers and ability to reach a wide audience, can help to spread awareness about the importance of tax compliance and the benefits it brings to society. By partnering with influencers, tax authorities can leverage their reach and influence to promote tax compliance among e-commerce players and the public. This collaboration can be an effective way to increase awareness and understanding of tax obligations, and ultimately improve compliance in the e-commerce sector.

These strategies not only benefit the tax authority and e-commerce players, but also contribute to a more transparent and fair society by significantly increasing government revenue. As we move forward, it is crucial to continue exploring and implementing innovative strategies to improve tax compliance in the ever-evolving e-commerce landscape. The future of tax compliance in Malaysia is uncertain, but the strategies mentioned above provide a good starting point. As the e-commerce landscape continues to evolve, it is important to stay up to date on the latest developments and to adapt our strategies accordingly.



## REFERENCES

- Abd Hamid, N., Ibrahim, N.A., Ibrahim, N.A., Ariffin, N., Taharin, R. & Jelani, F.A., (2019). Factors affecting tax compliance among Malaysian SMEs in e-commerce business. *International Journal of Asian Social Science*, 9(1),74-85.
- Abdul Hamid, N., Rasit, Z.A., Ishak, A.I.B., Abd Hamid, R.B. , Abdullah, F.A.B. & Sanusi, S., (2020). Determinants of tax compliance among Grabcar in Malaysia. *International Journal of Innovation, Creativity and Change*, 10(11), 2020.
- Adam, S.M., Shagari, S.L., Baba, B.U. & Saidu, S., (2021). Determinants of e-commerce users' behaviour on tax compliance intention in Nigeria: A conceptual model. *International Journal of Intellectual Discourse*, 4(1), 88-103.
- Alm, J., & Torgler, B. (2004). Culture differences and tax morale in the United States and in Europe. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.562861>.
- Bernard, O.M., Memba, F.S. & Oluoch, O., (2018). Influence of tax knowledge and awareness on tax compliance among investors in the export processing zones in Kenya. *International Journal of Scientific Research and Management*, 6(10),728-733.
- Hamid, N.A., Ismail, I.S., Yunus, N., Jali, M.N. & Rosly, A.S., (2022). Taxpayer perceptions of tax awareness, tax education, and tax complexity among small and medium enterprises in Malaysia: A quadrant analysis approach. *Universal Journal of Accounting and Finance*, 10(1), 231-242.
- Khamis, I.H., & Mastor, N.H. (2021). Service Quality, Tax awareness and Tax fairness as determinants of tax compliance among e-commerce enterprises in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 938-951.
- Mahran, M., Abdul Rashid, S. F., Ramli, R., & Abu Hassan, N. S. (2023). Factors influencing tax compliance among TikTok users engaged in e-commerce activities in Malaysia. *Asia-Pacific Management Accounting Journal*, 18(2), 238–242.
- Shahroni, N.A.H., Jusoh, Y.H.M., Mohamed, W.M.F.W., Salleh, M.S.M. & Mustafa, W.M.W., (2022). Post Covid-19 and e-commerce in Malaysia: Tax compliance evidence among Youtubers, Instafamous and Facebookers. *Asian Journal of Accounting and Finance*, 4(1), 26-42.
- Sitorus, R.R., (2018). Does e-commerce effect on total tax paid through taxpayer's compliance. *Journal of Accounting, Business and Finance Research*, 4(2), 40-48.

# IMPLEMENTATION OF E-ACCOUNTING APPLICATIONS IN CLOUD TECHNOLOGY: AN ACCOUNTING PROCESS

\* Fa'izah Ghazi<sup>1</sup>, Nor Hashimah Abdul Wahid<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [faizahghazi@uitm.edu.my](mailto:faizahghazi@uitm.edu.my)



## Introduction

Significant advancements in computer sciences have been observed since the creation of the first mechanical computer by Charles Babbage in the first half of the 19th century and the invention of the first programmable, electronic, general-purpose digital computer in 1945 (Öztürk & Kula, 2021). Business functions across various industries have increasingly integrated advanced hardware and software systems, with the accounting sector being no exception. Brabetea and Goagăra (2022) suggest that a continuous evolutionary process, characterized by the consistent adoption of new information technologies, has contributed to the development and modernization of the accounting profession.

Current business models have been significantly influenced by globalization, dynamic digitalization, information and knowledge competition, and dissemination (Lutfi, 2021). In addition, the present technological era has led to great investment in data processing computerization in different activities, industries, and sectors. In essence, technological progressions are linked with the use of technological methods and applications, and eventually, these have led to several changes in business processes (Lutfi, 2022). Information technology (IT) plays a significant role in the field of E-accounting, which refers to the use of electronic methods and technologies to manage financial information and accounting processes.

In the past years, the COVID-19 era has seen rapid development in information systems due to the limitation of physical contact. Modern accounting procedures have evolved to include e-accounting as a necessary component, allowing businesses to automate their financial operations and better manage their financial resources.

### **What is E-Accounting?**

In the era of globalization, it requires all aspects of work to continue to innovate to create conditions that are effective and efficient. E-accounting has gained prominence due to its efficiency, accuracy, and cost-effectiveness. "Electronic accounting," often known as "e-accounting," is the practice of recording, managing, processing, and analyzing financial data and transactions using digital technology, software, and electronic systems. It includes a range of technological solutions intended to speed up accounting procedures, increase accuracy, and boost the effectiveness of financial record-keeping and reporting.

E-accounting involves making use of accounting software and computers to record, store and analyze financial data (Esmeray & Esmeray, 2020), and it makes sure that the information of critical financial is controlled, accurate and safe from corruption of data (Uzrail & Bardai, 2019). E-accounting (or online accounting) is the application of online and Internet technologies to the business accounting function. Similar to email being an electronic version of traditional mail, e-accounting is the "electronic enablement" of lawful accounting and traceable accounting processes which were traditionally manual and paper-based.

E-accounting involves performing regular accounting functions, accounting research, and accounting training and education through various internet-based or computer-based accounting tools, such as digital tool kits, various internet resources, international web-based materials, institute and company databases which are internet-based, web links, internet-based accounting software and electronic financial spreadsheet tools to provide efficient decision making (Adewale, 2022).

E-accounting accuracy facilitates speed and lowers the cost of handling business operations (Cong et al., 2019); it eliminates some of the tedious and time-consuming tasks associated with manual accounting (Jędrzejka, 2019), and it facilitates all the procedures (calculations), including additions and deduction, is done automatically by software (Uzrail & Bardai, 2019). E-accounting helps to prepare financial statements and ensures high reliability (Abualoush et al., 2018) and it helps to record, keep, and move data by using a software system easier than sifting through a bunch of documents (Teru et al., 2019). The entire operation of preparing accounts becomes quicker while using E-accounting and the statements or reports can be generated instantly at the click of a button. E-accounting is sometimes stored and saved in off-site locations to be safe from natural disasters, fires, earthquakes, arson, and floods (Thottoli & Ahmed, 2021). It is also more efficient than paper-based accounting, thus work will be completed faster, and time saved (Paul & Sadath, 2019). Viewing accounts using E-accounting allows taking advantage of the option to view data in different charts, tables, and formats (Akandinda, 2019; Gofwan, 2022).

### **E-Accounting in Cloud Environment**

The term "e-accounting in a cloud environment" describes the application of cloud computing technologies to the informatization of accounting. It involves the provision of on-demand

accounting services through internet-based applications, allowing multiple users to access accounting software from anywhere and at any time (Sastararuji et al., 2022). E-accounting (or online accounting) is the application of online and Internet technologies to the business accounting function. As email is an electronic version of traditional mail, e-accounting is the "electronic enablement" of lawful accounting and traceable accounting processes which were traditionally manual and paper-based (Akintunde, 2022). The transition from traditional manual accounting to computerized accounting and digitalization has facilitated the work of accounting professionals, initially simplifying primary recording, classifying, and summarizing functions. Sabuncu (2022) states that digital transformation features the use of web-based accounting programs operating with cloud technology, enabling automatic data transfer to all official accounting programs and the automatic creation of documents.

Cloud accounting offers several advantages over traditional accounting information systems. It reduces the cost of construction and maintenance of accounting systems for enterprises and provides high-quality services such as seamless integration with external information systems and efficient processing of financial transactions (Chen et al., 2022). A large number of accounting software vendors have already shifted their products to the cloud and provide various forms of cloud accounting solutions (Dimitriu & Matei, 2015). Major accounting firms such as KPMG, PricewaterhouseCoopers, Ernst & Young, Deloitte, Sage or SAP own and present their own cloud offerings (Marsintauli et al., 2021).

The dynamic nature of the cloud accounting environment presents new challenges and risks for enterprises. The accounting cloud service operates in a dynamic and changing environment, with cloud storage located away from enterprise entities. This introduces new situations such as the reconstruction of accounting information processing processes and the need for seamless dynamic configuration. These changes increase the information risk for enterprises, making it crucial to assess the credibility of the accounting cloud service, propose a credibility analysis framework based on complex network analysis to evaluate the credibility of accounting cloud services (Chen et al., 2022). Online accounting solutions make it easier for different individuals to access accounting information outside of the workplace in a secure manner (Teru et al., 2019). Cloud accounting adoption has become increasingly important, especially in the context of the COVID-19 pandemic. Small and medium-sized enterprises (SMEs) can benefit from cloud-based accounting by becoming more efficient, financially organized, and flexible (Sastararuji et al., 2022).

Overall, e-accounting in a cloud environment offers numerous advantages for enterprises, including cost reduction, seamless integration with external systems, and efficient financial processing. However, the dynamic nature of the cloud environment and the need for credibility assessment pose challenges that need to be addressed. The sophistication of this online accounting-based technology offers convenience but also raises an important question, Does the data stored on third-party servers offer security, free from leakage of company information or is it a threat? This crucial consideration of knowing the benefits felt by companies and users and the risks that arise in its application needs further investigation. Understanding the factors influencing cloud accounting adoption can help organizations make informed decisions regarding the implementation of cloud-based accounting systems.



## Conclusion

In conclusion, IT plays a crucial role in e-accounting by enabling automation, providing software solutions, facilitating cloud computing, ensuring data security, enabling data analysis, supporting electronic transactions, ensuring compliance and reporting, providing audit trails, offering cost savings, and enabling data integration. The enhanced real-time data capabilities of cloud accounting make it ideal with proper preparation and monitoring. Accounting information deals with handling sensitive financial information and confidential data such as employee details. This data is valuable to cybercriminals and can be used for identity theft, financial fraud, and other malicious activities. Organizations need to invest in proper security infrastructure, such as encryption, and multi-factor authentication, to prevent any type of data breach. It is also crucial for firms to constantly monitor the security protocol and provide training programs to help all tasks conducted in line with the data security landscape. E-accounting has become increasingly important, allowing businesses to efficiently manage their financial operations and resources while ensuring accuracy, reliability, and accessibility of financial information.

## REFERENCES

- Abualoush, S., Masa'deh, R., Bataineh, K., & Alrowwad, A. (2018). The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organization performance. *Interdisciplinary Journal of Information, Knowledge, and Management*, 13, 279–309. <https://doi.org/10.28945/4088>
- Adewale, A. (2022). Cloud computing and electronic accounting [review of cloud computing and electronic accounting]. *Departmental Seminar Series with the Theme – History of Accounting Thoughts: A Methodological Approach*, 2(1), 52–56. <http://35.188.205.12:8080/jspui/bitstream/123456789/806/1/7.pdf>
- Akandinda, N. (2019, August 1). Computerized finance management system for Banton Clay Brick-making business. Dissertations.mak.ac.ug. <http://hdl.handle.net/20.500.12281/6436>
- Brabetea, V., & Goagărăb, D. (2022). Digitalization – a danger to accounting professionals? *Journal of Corporate Governance, Insurance and Risk Management*, 9(1), 25–48. <https://doi.org/10.51410/jcgirm.9.1.3>
- Chen, X., Guang, C., & Hua, D. (2022). Credibility analysis of accounting cloud service based on complex Network. *Journal of Sensors*, 2022, 1–11. <https://doi.org/10.1155/2022/5420772>
- Esmeray, A., & Esmeray, M. (2020). Digitalization in accounting through changing technology and accounting engineering as an adaptation proposal. *Handbook of Research on Strategic Fit and Design in Business Ecosystems*, 354–376. <https://doi.org/10.4018/978-1-7998-1125-1.ch015>
- Gofwan, H. (2022, May). Effect of accounting information system on financial performance of firms: a review of related literatures [Review of effect of accounting information

- system on financial performance of firms: a review of related literatures]. *Department of Accounting, Bingham University*.  
<http://localhost:8080/xmlui/handle/123456789/807>
- Jędrzejka, D. (2019). Robotic process automation and its impact on accounting. *Zeszyty Teoretyczne Rachunkowości*, 2019 (105 (161)), 137–166.  
<https://doi.org/10.5604/01.3001.0013.6061>
- Lutfi, A. (2021). Understanding cloud-based enterprise resource planning adoption among smes in jordan [Review of *Understanding Cloud Based Enterprise Resource Planning Adoption among SMEs in Jordan*]. *Journal of Theoretical and Applied Information Technology*, 99, 5944–5953.
- Lutfi, A. (2022). Understanding the intention to adopt cloud-based accounting information system in Jordanian SMEs. *The International Journal of Digital Accounting Research*, 22, 47–70. [https://doi.org/10.4192/1577-8517-v22\\_2](https://doi.org/10.4192/1577-8517-v22_2)
- Marsintauli, F., Novianti, E., Situmorang, R. P., & Djoniputri, F. D. F. (2021). An analysis on the implementation of cloud accounting to the accounting process. *Accounting*, 7, 747–754. <https://doi.org/10.5267/j.ac.2021.2.010>
- Öztürk, R., & Kula, V. (2021). A general profile of artificial intelligence adoption in banking sector. *Journal of Corporate Governance, Insurance and Risk Management*, 8(2), 146–157. <https://doi.org/10.51410/jcgirm.8.2.10>
- Paul, L. R., & Sadath, L. (2019). Choosing the right accounting software for organised retail environment, 2019 *International Conference on Computational Intelligence and Knowledge Economy (ICCIKE)*, Dubai, United Arab Emirates, 505 – 510. <https://doi.org/10.1109/ICCIKE47802.2019.9004321>
- Sabuncu, B. (2022). The effects of digital transformation on the accounting profession. *Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 15(1), 103–115. <https://doi.org/10.25287/ohuiibf.974840>
- Sastararujji, D., Hoonsopon, D., Pitchayadol, P., & Chiwamit, P. (2022). Cloud accounting adoption in Thai SMEs amid the COVID-19 pandemic: an explanatory case study. *Journal of Innovation and Entrepreneurship*, 11(1). <https://doi.org/10.1186/s13731-022-00234-3>
- Teru, S. P., Idoko, I. F., & Bello, L. (2019). The Impact of e - accounting in modern businesses. *International Journal of Accounting & Finance Review*, 4(2), 1–4. <https://doi.org/10.46281/ijaf.v4i2.355>
- Uzrail, A., & Bardai, B. (2019). Moderating effect of the adoption of computerized accounting information systems and the perceived effect on financial performance – a case study of Palestinian companies case, *IJCIRAS*, 2(2). <http://ijciras.com/PublishedPaper/IJCIRAS1303.pdf>

# CLOUD-BASED ACCOUNTING INTELLIGENCE APPLICATION: OPPORTUNITIES AND CHALLENGES TO INFORMATION SYSTEM

\*Fa'izah Binti Ghazi<sup>1</sup>, Norizam binti Ahmad @ Muhammad<sup>1</sup>

<sup>1</sup>Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Perlis

\*Corresponding author: [faizahghazi@uitm.edu.my](mailto:faizahghazi@uitm.edu.my)



## Introduction

The accounting profession has experienced difficulties due to the growing complexity of corporate environments, as well as increased global competition and a flattening out of business cycles. The digitization of business, the serious potential of the Web, the implications of big data, and the growing significance of information mining have impacted businesses, including the accounting offices (Moudud-UI-Huq et al., 2020).

The effect of globalization, the fast advances in innovation and science, the rise of big data, the extensive use of Web-based applications, and even institutionalization have made the best possible setting for developing another IT idea, which is cloud accounting (Moudud-UI-Huq et al., 2020). The technology of the cloud is one of the greatest technological developments in the present time. The cloud database makes the software and information available online, which can be accessed by the users from any computer device with an internet connection from anywhere and at any time. One industry heavily impacted by the trend toward virtual work and digitization is accounting (Lawler et al., 2012).

Cloud accounting is the process of managing and storing financial data in the cloud and simultaneously carrying out accounting tasks. In cloud computing, through cloud software assistance providers, the consumer can open the software apps from far away by using internet technology (Amar, 2023). Cloud-based accounting information systems (AIS) complemented

by, for example, electronic invoicing systems and interconnectivity with electronic banking and government infrastructures serve as a vehicle to conduct accounting processes in virtual mode (Asatiani et al., 2019; Bhimani & Willcocks, 2014).

Thus, in theory, an accounting firm equipped with such AIS could manage its work virtually completely. Cloud technology has blurred the line between employees and offices, as cloud technology, tools, and services pervade almost every aspect of business (Gangwar et. al., 2015; Shetty & Panda, 2021). The impact of cloud computing is undeniable and will serve as a foundation for the financial market's future evolution.

### **Cloud Accounting and Information Systems**

Research has shown that cloud-based AIS can provide companies with multiple benefits over the more traditional information systems, including easy access to affordable information systems that feature enhanced data processing capabilities, improved accessibility, and real-time collaboration functionalities (Armbrust et al., 2010; Asatiani et al., 2019).

Deployment of cloud-based AIS also influences accounting configurations by providing a platform where the client company and the accounting firm can simultaneously work on the data and the process, thus allowing new ways of organizing the work in an outsourcing relationship. The flexibility and potential affordability of cloud-based outsourcing services make these specifically attractive to small and medium-sized enterprises (SMEs) that have limited resources and expertise (Asatiani et al., 2019) and, therefore, cannot afford to build these services on their own.

### **Benefits and Challenges of Cloud Accounting**

Cloud accounting makes company accounts and financial data accessible anywhere, anytime (Dimitriu & Matei, 2014). One of the key benefits of cloud accounting is cost savings. By using cloud-based software, organizations can avoid the upfront costs of purchasing and maintaining hardware and software. They can also benefit from economies of scale, as cloud service providers can spread their costs across multiple clients, resulting in lower costs for each individual organization (Popivniak, 2019). Additionally, cloud accounting allows for greater convenience and mobility, as users can access their financial data and perform accounting tasks from anywhere with an internet connection (Popivniak, 2019). Cloud accounting reduces the annual burden of managing IT infrastructure. It reduces IT operations costs. Cloud accounting customizes services to meet businesses' needs (Dimitriu & Matei, 2014).

Cloud accounting can also improve organizational performance. A study conducted in Bangladesh found that cloud accounting has a positive impact on organizational performance. Regression analysis of the study showed that implementing cloud accounting can lead to improved performance, although there may be some negative impacts as well (Taha et al., 2021). A study conducted in Australia identified various risks associated with cloud accounting, such as data breaches and insecure interfaces, but also provided mitigation strategies to address these risks (Yau-Yeung et al., 2020). However, there are also challenges associated with cloud accounting. One of the main challenges is ensuring the security of financial data stored in the cloud. Organizations need to implement robust security measures and protocols to protect their financial data and ensure compliance with data protection regulations (Taha et al., 2021).



Another challenge is the need for organizations to adapt to the technological changes brought about by cloud accounting. Accountants who are not familiar with cloud-based accounting software may face difficulties in their roles (Christauskas & Miseviciene, 2012). Training and upskilling programs may be necessary to ensure that accountants have the necessary skills to effectively use cloud accounting software (Rindašu, 2017).

Furthermore, there may be challenges related to the implementation and integration of cloud accounting systems. Organizations need to carefully choose the right cloud-based accounting software that meets their specific needs and requirements (Popivniak, 2019). They also need to consider factors such as data migration, system integration, and user adoption when implementing cloud accounting (Mauricette et al., 2022).



In the case of cloud-based AIS this often includes access to both transactional and analytical data, as well as various applications, such as dashboards. Typically, cloud-based AIS can integrate all critical information required for accounting processes within the same system (Asatiani et al., 2019) and scale the system according to the needs of the client company (Chen et al., 2012; Schneider & Sunyaev, 2016), ensuring continuity of the service. Thus, different parties accessing the cloud-based AIS (such as client company, accountant, and auditor) have an opportunity to work simultaneously on the accounting process in real-time, in a transparent fashion.

Second, cloud-based AIS offers flexibility through easier implementation, and scalability of systems according to the requirements of the service (Leavitt, 2009). Furthermore, in terms of integration of applications and data, cloud-based AIS allows users to gather all the needed functionality and information to perform business processes within one shared platform, thus impacting the way the accounting process is organized (Leavitt, 2009; Marston et al., 2011).

Furthermore, the use of cloud-based accounting information systems (AIS) can have a significant impact on accounting outsourcing decisions. Cloud-based AISs are often hosted by third-party vendors, providing simultaneous and ubiquitous access to multiple parties involved in the accounting process (Al-Okaily et al., 2022). This includes access to transactional and analytical data, as well as various applications. The flexibility and accessibility of cloud-based AIS make it an attractive option for outsourcing accounting processes (Al-Okaily et al., 2022).

## Conclusion

In conclusion, the integration of cloud computing and Accounting Information Systems has revolutionized the field of accounting to date. Cloud accounting provides flexible access to accounting services hosted remotely on the cloud, while technologies can enhance the efficiency and accuracy of accounting processes. The combination of these technologies can lead to major changes in tasks and skills in the accounting profession, with some roles being performed by technology and others requiring collaboration between humans and technology. Additionally, cloud-based AIS offers benefits for accounting outsourcing decisions, providing simultaneous access to multiple parties involved in the accounting process. Additionally, cloud accounting offers benefits for accounting outsourcing decisions, providing simultaneous access to multiple parties involved in the accounting process.

## REFERENCES

- Al-Okaily, M., Alkhawaldi, A. F., Abdulmuhsin, A. A., Alqudah, H., & Al-Okaily, A. (2022). Cloud-based accounting information systems usage and its impact on Jordanian SMEs' performance: the post-COVID-19 perspective. *Journal of Financial Reporting and Accounting*, 21(1), 126-155. <https://doi.org/10.1108/jfra-12-2021-0476>
- Amar, N. (2023). Accounting "in the cloud": a new paradigm of accounting. *The Ciência & Engenharia. Science & Engineering Journal*, 11(1), 1330-1336. <https://doi.org/10.52783/cienceng.v11i1.281>
- Armbrust, M., Stoica, I., Zaharia, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski, A., Lee, G., Patterson, D., & Rabkin, A. (2010). A view of cloud computing. *Communications of the ACM*, 53(4), 50. <https://doi.org/10.1145/1721654.1721672>
- Asatiani, A., Apte, U., Penttinen, E., Rönkkö, M., & Saarinen, T. (2019). Impact of accounting process characteristics on accounting outsourcing - comparison of users and non-users of cloud-based accounting information systems. *International Journal of Accounting Information Systems*, 34, 100419. <https://doi.org/10.1016/j.accinf.2019.06.002>
- Bhimani, A., & Willcocks, L. (2014). Digitization, "Big Data" and the transformation of accounting information. *Accounting and Business Research*, 44(4), 469-490. <https://doi.org/10.1080/00014788.2014.910051>
- Chen, H., Chiang, R. H. L., & Storey, V. C. (2012). Business Intelligence and Analytics: From Big Data to Big Impact. *MIS Quarterly*, 36(4), 1165. <https://doi.org/10.2307/41703503>
- Christauskas, C., & Miseviciene, R. (2012). Cloud-computing based accounting for small to medium sized business. *Engineering Economics*, 23(1), 125-139. <https://doi.org/10.5755/j01.ee.23.1.1220>
- Dimitriu, O., & Matei, M. (2014). A new paradigm for accounting through cloud computing. *Procedia Economics and Finance*, 15, 840-846. [https://doi.org/10.1016/s2212-5671\(14\)00541-3](https://doi.org/10.1016/s2212-5671(14)00541-3)

- Gangwar, H., Date, H., & Ramaswamy, R. (2015). Understanding determinants of cloud computing adoption using an integrated TAM-TOE model. *Journal of Enterprise Information Management*, 28(1), 107–130. <https://doi.org/10.1108/jeim-08-2013-0065>
- Lawler, J., Joseph, A., & Howell-Barber, H. H.-B. (2012). A case study of determinants of an effective cloud computing strategy. *Review of Business Information Systems (RBIS)*, 16(3), 145–156. <https://doi.org/10.19030/rbis.v16i3.7132>
- Leavitt, N. (2009). Is cloud computing really ready for prime time? *Computer*, 42(1), 15–20. <https://doi.org/10.1109/mc.2009.20>
- Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud computing — the business perspective. *Decision Support Systems*, 51(1), 176–189. <https://doi.org/10.1016/j.dss.2010.12.006>
- Mauricette, J., Wells, P., & Haar, J. (2022). User perceptions of cloud-based small business accounting software. *Pacific Accounting Review*, 34(4) 595-613 <https://doi.org/10.1108/par-05-2021-0065>
- Popivniak, Y. (2019). Cloud-based accounting software: choice options in the light of modern international tendencies. *Baltic Journal of Economic Studies*, 5(3), 170-186, <https://doi.org/10.30525/2256-0742/2019-5-3-170-177>
- Rîndașu, S.-M. (2017). Emerging information technologies in accounting and related security risks – what is the impact on the Romanian accounting profession. *Journal of Accounting and Management Information Systems*, 16(4), 581–609. <https://doi.org/10.24818/jamis.2017.04008>
- Schneider, S., & Sunyaev, A. (2016). Determinant factors of cloud-sourcing decisions: reflecting on the it outsourcing literature in the era of cloud computing. *Journal of Information Technology*, 31(1), 1–31. <https://doi.org/10.1057/jit.2014.25>
- Shetty, J. P., & Panda, R. (2021). An overview of cloud computing in SMEs. *Journal Of Global Entrepreneurship Research*. 11, 175-178, <https://doi.org/10.1007/s40497-021-00273-2>
- Moudud-Ul-Huq, S., Asaduzzaman, Md., & Biswas, T. (2020). Role of cloud computing in global accounting information systems. *The Bottom Line*, 33(3). 231-249. <https://doi.org/10.1108/bl-01-2020-0010>
- Taha, A. A. D., Ramo, W., & Alkhaffaf, H. H. K. (2021). Impact of external auditor–cloud specialist engagement on cloud auditing challenges. *Journal of Accounting & Organizational Change, ahead-of-print(ahead-of-print)*, 17(3). 309-331. <https://doi.org/10.1108/jaoc-08-2020-0111>
- Yau-Yeung, D., Yigitbasiglu, O., & Green, P. (2020). Cloud accounting risks and mitigation strategies: evidence from Australia. *Accounting Forum*, 44(4) 1–26. <https://doi.org/10.1080/01559982.2020.1783047>

# MOBILE BANKING IMPLEMENTATION IN INDONESIA: THE PERSPECTIVE OF DIFFUSION OF INNOVATION IN ACCOUNTING

\*Sambas Ade Kesuma<sup>1</sup>, Risanty<sup>1</sup>, Alyssa Nadia<sup>1</sup>

<sup>1</sup>Accounting Department, Faculty of Economics and Business, Universitas Sumatera Utara

\*Corresponding author: [sambas@usu.ac.id](mailto:sambas@usu.ac.id)



## Introduction

Mobile banking is one of the most phenomenal banking services offered today. Mobile banking allows customers to directly access via their smartphones. Mobile banking is an innovation revolution supported by the fastest development of communication technology in the world (Bharti, 2016). Mobile banking services are generally the same as internet banking and Automatic Teller Machines (ATM), such as billing, fund transfers, purchases, account information, exchange rate information, and e-wallet top-up. In addition, mobile banking charges are generally more affordable than internet banking and ATM.

In some countries, mobile banking services have been offered for quite a long time. In Saudi Arabia, mobile banking has been introduced by large and small banks (Al-Jabri & Sohail, 2012). Zhou (2011) states that mobile banking has also been implemented for quite a long in China, especially among students. Mobile banking is also developing rapidly in Iran, among teachers/lecturers and students (Toloie & Bayanati, 2012). Moreover, Ling et al. (2015) reports



that, in Malaysia, the implementation of mobile banking is very popular, especially among students.

In Indonesia, mobile banking has been implemented since 2003. However, mobile banking was initially combined with internet banking, also known as electronic banking. Over the last decade, internet banking has been widely used by banking customers in Indonesia compared to mobile banking. In recent years, the Indonesian government and several banks in Indonesia have promoted the use of mobile banking for all their customers. Thus, mobile banking has become an alternative banking service that is widely used by bank customers in Indonesia. By 2020, there are more than 22 mobile banking applications that can be downloaded for free by all banking customers in Indonesia.

In the context of student life in Indonesia, mobile banking is currently very popular, especially among accounting students. Students generally use mobile banking for online shopping transactions. The convenience and ease of payments integrated with leading online marketplaces in Indonesia such as Tokopedia, Shopee, Lazada, Bukalapak, and others have made mobile banking increasingly popular among accounting students at Universitas Sumatera Utara (Kesuma et al., 2020). The open-mindedness and easy-to-accept new technology are also the reason why mobile banking is popular among students (Ling et al., 2015). Single Tuition Fee, that used to require going to the bank and standing in long queues, is now shifting to payment via mobile banking by several universities in Indonesia.

Successful adoption of mobile banking occurs when users have made the decision to adopt it (Ravichandran & Madana, 2016). According to the Diffusion of Innovation theory, five main indicators can be used to accelerate the adoption of innovations in relation to individuals, groups, or social systems. These indicators are relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003).

This article explores the adoption of mobile banking in Indonesia and the role of Diffusion of Innovation theory in the adoption of this innovation. This article consists of several sections. After this introductory section, the concept of mobile banking and its adoption in Indonesia is discussed. The next section briefly discusses the theory of diffusion of innovations. Moreover, the diffusion of innovation theory and mobile banking adoption are discussed. The last section provides a conclusion.

### **Mobile Banking in Indonesia**

Mobile banking is an evolution of internet banking that provides direct access to banking transactions via mobile applications (Laukkanen & Kiviniemi, 2010). Zhou (2011) defines mobile banking as the interaction between customers and financial institutions via smartphones. The main mobile banking services include domestic or international fund transfers, bill payments, and top-ups (Cruz et al., 2010).

The first mobile banking application was launched in the late 1990s in Germany when the German Company Paybox began partnering with Deutsche Bank (Shaikh & Karjaluo, 2014).

Exelcom, in partnership with several banks, first introduced mobile banking in Indonesia in 1995 (Mauluddi, 2020). Exelcom is a cellular telecommunications operator that is now known as XL Axiata. Bank Central Asia was the first bank to implement and develop mobile banking services between 2001 and 2003, followed by other Indonesian banks (Riza & Hafizi, 2020). Initially, mobile banking was combined with web-based internet banking, known as electronic banking. However, in recent years, the use of mobile banking has been promoted by banks to increase customer trust through the utilization of mobile technology (Kurniasih, 2020). Several banks in Indonesia, particularly state-owned banks, have adopted this technology. In order to enhance their online banking services, state-owned banks in Indonesia in particular have adopted and implemented cutting-edge technology (Kesuma et al., 2016). Moreover, Indonesian banks are enhancing the convenience of mobile banking services. More users are switching to this service, which allows them to complete their financial transactions without having to go directly to the bank office or ATM (Mushofa & Lindiawati, 2018).

According to Sukma (2018), mobile banking provides accessible, anywhere and anytime services, allows users to access their most recent balance following the online transaction, saves time, and is free to use. The functions of mobile banking are also more comprehensive and easier to use through a smartphone application. Compared to internet banking services, mobile banking offers cost savings, faster service speed, and competitive strategies (Toloie & Bayanati, 2012).

In contrast, mobile banking has several weaknesses, for instance, some mobile banking applications are only compatible with certain providers, and data or network speeds vary by location, and daily transaction limits (Hussain et al., 2014). Mobile banking services typically consist of bill payments (electricity, water, internet, credit card, and insurance), fund transfers, purchases, digital wallet top-ups, printing bank statements, paying taxes, making investment deposits, and others.

### **Diffusion of Innovation Theory**

The diffusion of innovation theory was developed in 1930 by a French scientist, Gabriel Tarde. In his book "The Law of Imitation," Tarde (1930) revealed that an innovation implemented by an individual or group is viewed from the perspective of time (Rogers, 2003). Tarde's idea was further developed by Everett M. Rogers in 1983 in a book entitled "Diffusion of Innovation". Rogers (1983) explains that the length of time it takes for an to be adopted by individuals or social groups depends on the decisions made during the innovation process, as does the innovation itself. Rogers (2003) further developed his theory and published the fifth edition of the book "Diffusion of Innovation Fifth Edition" in 2003.

Rogers (2003) defines diffusion as the process of spreading information among individuals or social groups over a period of time. On the other hand, an innovation is an idea, concept, process, and product or object discovery that is perceived as new. The wider society will adopt, implement, and accept this innovation (Rogers, 2003). The diffusion of innovation theory, thus describes how the innovation process is communicated to individuals or social systems. The

process of communicating innovation involves five stages (see *Figure 1*), knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003).

1. Knowledge is the capability or understanding of how an innovation works when exposed to something new.
2. Persuasion is when individuals exhibit positive or negative attitudes toward innovation.
3. Decision is when an individual decides whether to reject or adopt the innovation.
4. Implementation is when an individual decides to adopt and incorporate innovation into daily activities.
5. Confirmation is when individuals begin to investigate the confirmation of their innovation decisions.

Before the decision-making stage, there are five main characteristics or indicators that can influence the decision-making to accept or reject an innovation. Apart from this, this characteristic is able to minimize the level of innovation uncertainty, influence the speed of a community in adopting new innovations, and increase the success of adopting an innovation (Indriyati & Aisyah, 2019).

According to Rogers (2003), the first indicator is relative advantage, which is a new innovation that is perceived to be better than previous innovations. The second indicator is compatibility, a new innovation that is perceived as being in accordance with existing values, and past experience, as well as accordance with individual or group needs. The next indicator is complexity, a new innovation that is perceived as difficult to understand or use. Trialability is the next most important indicator. Trialability is an innovation that can be tested first in a limited scope. The final indicator is observability, which means that the results of a new innovation can be clearly seen for an individual or group. According to Rogers (2003), the five main indicators of innovation play a very important role in persuasion in innovation decisions.

Previous research states that Rogers' diffusion of innovation theory is the most well-known and widely respected by researchers (Bradford & Florin, 2003; Forman, 2005; Grantham & Tsekouras, 2005). Initially, the diffusion of innovation theory was widely applied in anthropology, sociology, education, communication, marketing, geography, economics and management. Currently, diffusion of innovation theory has been used as the main reference for research, especially in information systems and accounting. In the past decade, diffusion of innovation theory was applied in research on the internet and mobile technology (Al-Jabri & Sohail, 2012; Chen et al., 2004; Forman, 2005; Nor et al., 2010; Park & Yoon, 2005). In Indonesia, several previous studies have also used diffusion of innovation theory in mobile and internet technology, including, Intani and Rikumahu (2020), Kurniasih (2020), Wiratno (2020).

Several studies agree that the diffusion of innovation theory is appropriate to be applied to information systems because of its ease of application and simplicity (Al-Jabri & Sohail, 2012; Nor et al., 2010; Park & Yoon, 2005). The diffusion of innovation theory is also an appropriate theory for predicting the level of use or adoption of new technology. In addition, the diffusion

of innovation theory can be modified by adding several constructs to increase its predictive power (Grantham & Tsekouras, 2005; Intani & Rikumahu, 2020; Moore & Benbasat, 1991).



### **Mobile Banking Adoption and Diffusion of Innovation**

According to the diffusion of innovation theory, relative advantage is the perception that a new innovation is better than the previous innovation. A better level of relative advantage accelerates the implementation of the new innovation (Rogers, 2003). An individual who perceives that mobile banking has more value compared to previous banking services will quickly integrate mobile banking into their daily activities. Previous studies such as Mandatra and Sutarso (2019) and Kaur et al. (2020) find that relative advantage has a positive and significant effect on mobile banking adoption.

Diffusion of innovation theory views compatibility as a perception that new innovations are by existing values, past experiences, and individual or group needs. A high level of compatibility with an innovation accelerates the implementation of the innovation (Rogers, 2003). Nor et al (2010) suggest that online banking services need to adapt to current lifestyles or needs of the time. This is supported by previous researchers such as Al-Jabri and Sohail (2012), Ravichandran and Madana (2016) and Sukma (2018) who argue that compatibility has a significant influence in accelerating the adoption of mobile banking.

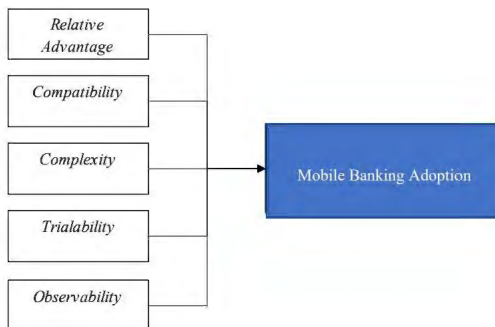
In the context of complexity, the diffusion of innovation theory assumes that an innovation is perceived as difficult to use and understand. Rogers (2003) believes that low complexity in terms of using new innovations will accelerate the implementation of the innovation. In general, mobile banking services were created to provide more convenience to customers in direct transactions (Lin, 2011). Features were modified to make all services simpler and easier to use (Latip et al., 2017). Thus, if mobile banking has a high level of complexity, it will slow down customer adoption (Akmalia & Rikumahu, 2020). Indriyati and Aisyah (2019), Entele



(2019), and Kurniasih (2020) agree that complexity needs to be minimized to accelerate mobile banking adoption.

According to the diffusion of innovation theory, trialability is a new innovation that can first be tested in a limited scope. Thus, if the innovation can be tested, it accelerates the adoption of an innovation (Rogers, 2003). The use of mobile payment methods by developers has a significant influence on the use of mobile banking, this will minimize user concerns and motivate other users to adopt mobile banking (Intani & Rikumahu, 2020). New users of mobile banking will tend to try it out first before deciding to implement it. Therefore, if mobile banking can be tested, it will further accelerate the adoption of mobile banking (Mushofa & Lindiawati, 2018). Kurniasih (2020), and Nor et al (2010) state that trialability has a positive effect on mobile banking. They also emphasize that trialability makes it easier and faster to adopt mobile banking.

Finally, Diffusion of innovation theory explains that observability is a new innovation that can provide benefits for an individual or community. An optimal level of observability will therefore accelerate the adoption of the innovation itself (Rogers, 2003). Observability in the context of mobile banking is the personal perception of the use of mobile banking will provide clear benefits (Cruz et al., 2010). An individual will get direct benefits from using mobile banking if these benefits can be seen so that it will speed up the adoption of mobile banking (Al-Jabri & Sohail, 2012). Kaur et al. (2020), and Entele (2019) agree that observability has a positive effect on mobile banking adoption and recommending the service.



**Figure 1. Mobile Banking Adoption and Diffusion of Innovation**

## Conclusion

Currently, mobile banking is one of the most popular banking services. Mobile banking is an evolution of internet banking which provides primary access to banking transactions through mobile application. In Indonesia, the government together with several leading banks in Indonesia have promoted the use of mobile banking to all their customers. Currently, mobile banking is widely used by bank customers in Indonesia. Mobile banking is widely popular among students in Indonesia, particularly accounting students. Students generally use mobile banking for online shopping transactions. The convenience and integration with the leading online marketplace in Indonesia are some of the drivers of increasing mobile banking adoption.

According to the Diffusion of Innovation theory, to accelerate the adoption of innovation either in terms of individuals, groups or social systems. The Diffusion of Innovation Theory can be used to accelerate the adoption of innovations, both in terms of individuals, groups or social systems. Moreover, the diffusion of innovation theory is an appropriate theory for predicting the level of use or adoption of new technology, including Mobile Banking. The diffusion of innovation theory proposes five key indicators to accelerate mobile banking adoption. These indicators are relative advantage, compatibility, complexity, trialability, and observability. Several previous researchers agree that the five indicators suggested by the Diffusion of Innovation theory are able to accelerate the adoption of an innovation.

## REFERENCES

- Akmalia, A. N., & Rikumahu, B. (2020). Analisis tingkat adopsi layanan perbankan digital menggunakan teori difusi inovasi (Objek studi: Jenius oleh bank BTPN di Kota Bandung dan Jakarta). *Jurnal Mitra Manajemen*, 4(8), 1196-1207.
- Al-Jabri, I. M., & Sohail, M. S. (2012). Mobile banking adoption: Application of diffusion of innovation theory. *Journal of Electronic Commerce Research*, 13(4), 379-391.
- Bharti, M. (2016). Impact of dimensions of mobile banking on user satisfaction. *The Journal of Internet Banking and Commerce*, 21(1).
- Bradford, M. & Florin, J. (2003). Examining the role of innovation diffusion factors on the implementation success of enterprise resource planning systems. *International Journal of Accounting Information Systems*, 4(3), 205-225.
- Chen, L., Gillenson, M. L., & Sherrell, D. L. (2004). Consumer acceptance of virtual stores: A theoretical model and critical success factors for virtual stores. *Database for Advances in Information Systems*, 35(2), 8-31.
- Cruz, P., Neto, L. B. F., Munoz-Gallego, P., & Laukkanen, T. (2010). Mobile banking rollout in emerging markets: Evidence from Brazil. *International Journal of Bank Marketing*, 28(5), 342-371.
- Entele, B. R. (2019). Mobile banking technology in Ethiopia. *Ethiopian Journal of Sciences and Sustainable Development*, 6(2), 61-71.

- Forman, C. (2005). The corporate digital divide: Determinants of internet adoption. *Management Science*, 51(4), 641.
- Grantham, A., & Tsekouras, G. (2005). Diffusing wireless applications in a mobile world. *Technology in Society*, 27(1), 85-104.
- Hussain, A., Abubakar, H. I., & Hashim, N. B. (2014). Evaluating mobile banking application: Usability dimensions and measurements. *Proceedings of the 6th International Conference on Information Technology and Multimedia*, 136-140.
- Indriyati, R. N., & Aisyah, M. N. (2019). Determinan minat individu menggunakan layanan financial technology dengan kerangka innovation diffusion theory. *Nominal: Barometer Riset Akuntansi dan Manajemen*, 8(2), 209-223.
- Intani, F. D., & Rikumahu, B. (2020). Penerapan teori difusi inovasi dalam adopsi mobile payment di provinsi Jawa Barat (Studi kasus: Go-pay, ovo, dana, linkaja & jenius). *eProceedings of Management*, 7(2).
- Kaur, P., Dhir, A., Bodhi, R., Singh, T., & Almotairi, M. (2020). Why do people use and recommend m-wallets?. *Journal of Retailing and Consumer Services*, 56.
- Kesuma, S. A., Risanty, Nasution, A. A., & Epriel, M. H. (2020). Online shopping customer behavior in Indonesia: A survey on accounting students. *Romanian Economic Journal*, 23(78), 67-81.
- Kesuma, S. A., Saidin, S. Z., & Ahmi, A. (2016). IT sophistication: Implementation on state owned bank in Indonesia. *International Review of Management and Marketing*, 6(S8), 234-239.
- Kurniasih, N. (2020). Persepsi nasabah bank syariah terhadap adopsi layanan mobile banking dalam kerangka difusi inovasi (Studi pada nasabah bank syariah di Purwokerto) [Undergraduate thesis, IAIN Purwokerto].
- Latip, M., Yahya, M. H., & Junaina, M. (2017). Factors influencing customer's acceptance of Islamic banking products and services. *Journal of Islamic Economics and Business*, 2(1), 1-18.
- Laukkanen, T., & Kiviniemi, V. (2010). The role of information in mobile banking resistance. *International Journal of Bank Marketing*, 28, 372-388.
- Lin, H. F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International Journal of Information Management*, 31(3), 252-260.
- Ling, C. H., Islam, M. A., Manaf, A. H., & Mustafa, W. M. (2015). Users satisfaction towards online banking in Malaysia. *International Business Management*, 9(1), 15-27.
- Mandrata, M. I., & Sutarso, Y., (2019). Pengaruh kegunaan, kesesuaian, keuntungan, motivasi, dan risiko terhadap niat perilaku pada mobile banking Bank Mandiri di Surabaya. *Journal of Business and Banking*, 9(1), 1-18.

- Mauluddi, H. A. (2020). Analisis faktor yang mempengaruhi penerimaan nasabah terhadap layanan mobile banking. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan, dan Akuntansi*, 12(1), 95-104.
- Moore, G. C., & Benbasat, I. (1991) Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2(3), 192-222.
- Mushofa, M. Z., & Lindiwati, L. (2018). Pengaruh kegunaan, kesesuaian, keuntungan relatif, motivasi hedonic, dan risiko yang dirasakan terhadap penggunaan mobile banking bank mandiri surabaya dimediasi niat perilaku nasabah. *Journal of Business and Banking*, 8(1), 121-140.
- Nor, M., K., Pearson, J. M., & Ahmad, A. (2010). Adoption of internet banking theory of the diffusion of innovation. *International Journal of Management Studies (IJMS)*, 17(1), 69-85.
- Park, S., & Yoon, S. (2005). Separating early-adopters from the majority: The case of broadband internet access in Korea. *Technological Forecasting and Social Change*, 72(3), 301-325.
- Ravichandran, D., & Madana, H. B. A. H. M. (2016). Factors influencing mobile banking adoption in Kurunegala district. *Journal of Information Systems & Information Technology*, 1(1), 24-32.
- Riza, A. F., & Hafizi, M. R. (2020). Customers attitude toward Islamic mobile banking in Indonesia: Implementation of TAM. *Asian Journal of Islamic Management*, 1(2), 75-84.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Simon & Schuster.
- Shaikh, A. A., & Karjaluo, H. (2014). Mobile banking adoption: A literature review. *Telematics and Informatics*, 35(5).
- Sukma, P. M. A. D. (2018). Analisis adopsi uang elektronik dengan pendekatan teori difusi inovasi (Studi pada pengguna uang elektronik ovo di Kota Malang). *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya*, 7(2), 1-12.
- Toloie-Eshlaghy, A., & Bayanati, M. (2013). Ranking information system success factors in mobile banking system with VIKOR. *Middle-East Journal of Scientific Research*, 13(11), 1515-1525.
- Wiratno, W. E. (2020). Analisis adopsi aplikasi uang elektronik melalui pendekatan teori difusi inovasi (Studi terhadap pengguna aplikasi uang elektronik DANA di Kota Malang). *Jurnal Ilmiah Mahasiswa Akuntansi*, 9(1).
- Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, 21(5), 527 – 540.