

Effect of Digital Literacy on Individual Work Performance Among Practicing Lawyers in Malaysia

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Abstract. Working industry adapting the changes in working environment are influenced by employee capabilities in adapting new situation especially involving the technology. Law practitioner's fields are also affected from the change of how the industry works. Work wise, this transition gives an impact to the performance in term of facilities and evaluation of accurate legal materials. This study investigated the effect of digital literacy on individual work performance among practicing lawyers in Malaysia. The data was collected from 271 respondents which were extracted into statistics testing using Statistical Package for the Social Science (SPSS) and Partial Least Squares Structural Equation Modelling (SmartPLS). The results revealed that the independent variables, namely technical skill, cognitive skill and social-emotional skill, influenced individual work performance. This paper provides in depth discussion on significant relationship between digital literacy and individual work performance among the practicing lawyers in Malaysia.

Keywords: Digital literacy, individual work performance, practicing lawyers, Malaysia, information management.

1 Introduction

Since the Industrial Revolution (IR), technology has evolved rapidly and will continue to expand and change accordingly. The rate of development is so rapid that new technologies can become obsolete before the corresponding research is published (Manderino & Castek, 2020). The advanced state of technology necessitates that organizations adopt and implement technology at every level so that employees can increase their productivity and work ethic. Digital literacy is the comprehension of

technical methods and information, as well as the cognitive and emotional skills required to manipulate multi-formatted data using a computer (Bunyamin Ayhan, 2016). Rich et al., (2010) revealed that digital literacy has an effect on the attitudes and conduct of employees. Utilization of technology is widespread in the legal industry, where the number of practises and services has evolved concurrently with the use of technology. Numerous initiatives, such as virtual hearings, e-review, and online submissions, demonstrate the legal industry's efforts to adapt to change (Habrat, 2020). The rapid development of the technology shown the legal firms in Malaysia encounter challenges in terms of dealing with documents, processing efficiency, case management, and marketing Juriah and Shukriah, (2020). To understand the wholeness of digital literacy towards individual work performance among practicing lawyers in Malaysia, this study has been conducted based on research question raised as below:

Q1. What is the level of skill of practicing lawyers on digital literacy and individual work performance?

Q2. How do the technical skills, cognitive skills, and socio-emotional skills affect the individual work performance among practicing lawyers in Malaysia?

2 Literature Review

2.1 Individual Work Performance and Legal Professional

According to Malaysia legislation on Legal Profession Act 1967 [Act166], practicing lawyers is an individual who qualified to practice the law in Malaysia by acquiring a practicing certificate from a Malaysian Bar. The practitioners in Malaysia are graduates from the universities that approved by Legal Profession Qualifying Board (LPQB) or passed the Certificate of Legal Practice (CLP) and Bar Professional Training Course (BPC). In addition, practicing attorneys are required to update their professional licenses on an annual basis. In the field of practice, there are many different kinds of disciplines. The areas of litigation, conveyancing, and corporate law constitute the majority of practice. In Malaysia, there are approximately 20,384 active lawyers who have been granted the certificate, which allows them to work as partners, sole proprietors, legal associates, or consultants in the legal industry.

Meanwhile, individual work performance is the ability of employees to perform according to the task given that is parallel with organization goals and objectives. The performance measures how well one individual fulfills his or her work requirements (Agim & Azolo, 2019). Numerous publications demonstrate that digital literacy improves individual work performance. Digital literacy has an impact in the creation and implementation of new ideas, the reduction of the manual labor work, providing better services to the user, improving satisfaction among the employees, and becoming survival skills for practicing lawyers to deal with issues in the digital era. (Abbas et al., 2014; Agim & Azolo, 2019; Alkalai, 2004; Mohd Abas et al., 2019; Philosophy & Itsekor, 2012).

2.2 Digital Literacy

Digital literacy can be defined as comprehension of technical methods, information, and the ability to manipulate multi-formatting data by using a computer with cognitive and emotional skills (Bunyamin Ayhan, 2016). Meanwhile, Phuapan et al. (2015); Rahman et al. (2020) highlighted several of the landscape of digital literacy, including the ability to understand information presented in multiple formats, as well as the ability to manipulate software in digital devices, all of which involve cognitive, motor, sociological, and emotional processes in order to function in digital environments. As listed, the review will focus on three skills that are related with digital literacy namely, technical skill, cognitive skill and social-emotional skill.

Technical skills in this context can be portrayed as the ability to deliver tasks through a digital platform with a technical and operational skillset that enables the person who possesses the attribute to manipulate their knowledge in using hardware and software in the correct manner with minimal instruction (Ng, 2012). In other words, technical skills are abilities to deliver tasks. The skills set obtained influences the way of thinking, decision-making process, and creativity and creates flexibility to manipulate the skills suitable for their use (Alkalai, 2004; Calvani et al., 2008; Porat et al., 2018).

Cognitive skills in digital literacy are the abilities to think critically in searching, evaluating and creating a cycle of digital information handling (Baharuddin et al., 2021). In addition to this, decision-making is required in order to select or choose a platform, software, or tools with which to do a task. The cognitive abilities cover the aspect of selecting the platform for managing digital information as well as their concerns in legal and ethical contexts (Ng, 2012; Vodã et al., 2022). Calvani et al., (2008) stated that the multidimensional attribute is part of cognitive skills in digital literacy which is the ability to read, select, interpret and evaluate data and information by taking into account their reliability. Eshet (2012) evaluated performance in the digital environment based on the utilisation of cognitive abilities. The cognitive ability was able to provide an accurate representation of the performance of the employers in the digital setting. The favorable outcome is was due to the contribution of competent educators and software experts who provided useful guidelines. Manovich, (2013) mentioned one of the cognitive tools of digital literacy is visualization.

Furthermore, the social-emotional facets of interacting with others, working together, and accomplishing day-to-day chores through the use of an online platform were covered by socio-emotional skills (Ng, 2012). This could be accomplished by adhering to ethical standards when using a digital platform in order to prevent misunderstandings, keep personal information as confidential as is reasonably possible, and react in an appropriate manner when dealing with any problems that may arise on the digital platform. (Agim & Azolo, 2019; Ng, 2012). The rapid growth of internet communication causes the socio-emotional skill to be important in handling digital content as quoted by Eshet (2012). These abilities are necessary to maintain a successful communication presence in cyberspace. According to Manovich (2013), the various kinds of information platforms will each provide their own unique expressions and representations, each of which will have an emotional impact on the user.

3 Theoretical Framework

Models from Calvani et al. (2008), Ng (2012), and Santoso et al. (2019) has been adapted and adopted for this study to discover the effect of digital literacy on the individual work performance among practicing lawyers in Malaysia. There are three potential independent variables that can be used to indicate digital literacy. These variables are technical, cognitive, and socio-emotional skill. Individual work performance is the variable that would serve as the dependent variable among practicing lawyers. Three hypotheses have been determined for this study which are:

H1: Technical skill has a positive relationship with work performance among practicing lawyers.

H2: Cognitive skill has a positive relationship with work performance among practicing lawyers.

H3: Social-Emotional skill has a positive relationship with work performance among practicing lawyers.

The proposed framework depicted in Figure 1 shows the technical skill, cognitive skill and social-emotional skill, hypothesised to impact on individual work performance.

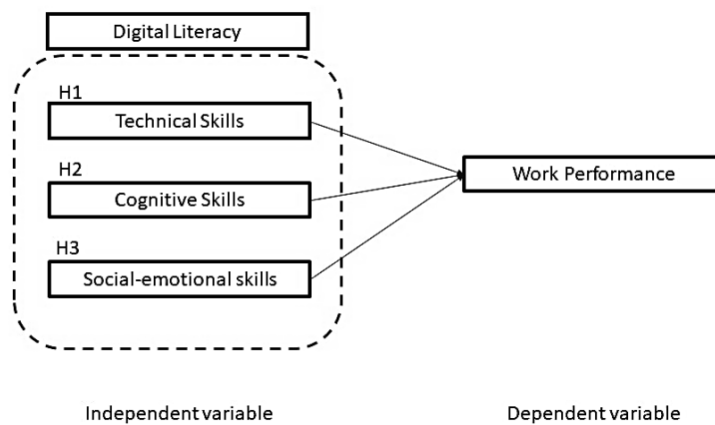


Figure 1: Theoretical Framework

4 Methodology

This study was conducted in quantitative nature and the survey research was used as a technique to collect data. This study performed evaluation on a population of 20,384, with a minimum sample size of 269 respondents among practicing lawyers in Malaysia.

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The questionnaires were developed according to research questions and the theoretical framework. It was a close-ended question using 5 Likert Scale that enables the respondent to select any options provided by the researchers. These techniques assisted the researcher to collect quantitative data systematically so that the data were consistent and clear for analysis (Roopa & Rani, 2012). A total of 400 questionnaires had been distributed. A total of 271 (67.75%) responses which achieved the confidence of 90% had been received by the researcher as the outcome of the distribution. All the data were extracted into statistical tests performed on two platforms known as Statistical Package for the Social Science (SPSS) and Partial Least Squares Structural Equation Modelling (SmartPLS). SPSS provides functions to help the researcher to construct complex statistics which more focusing on management and data construction for social science. Meanwhile, SmartPLS provides functions to test internal consistency and convergent validity in reflective assessment model.

5 Results and Discussion

5.1 Common Method Bias (CMB)

Harman's single factor score is frequently employed to assess common method bias (CMB). For this study, all items from all the constructs studied were entered for analysis and constrained to only a single factor. The results suggest that the single factor explained only 34% which is less than the benchmark value of 50% of the total variance, therefore indicating that CMB is not a likely contaminant of the research.

5.2 Demographic Analysis

Out of 271 respondents who returned the survey, 138 (50.9%) of them are male, while the rest is 133 (49.1%) females. Meanwhile, the survey differentiated the group by their ages, showing the most responsive group was the group aged 24-34 years old (38.7%), followed by those aged 35-45 (26.6%), 46-56 (18.8%), 57-67 (11.4%), and over 67 (4.4%). Most respondent had been practicing about 6-10 years (n=82: 30.3%). In addition, in the status of practice among respondent was led by legal associates (n=105: 38.7%), followed by partnership (n=78: 28.8%), Sole Proprietor (n=60: 22.1%), others (n=21: 7.7%), and consultants (n=7: 2.6%).

5.3 Descriptive Analysis

The purpose of descriptive statistics is to organize data, which will be presented in detail supported by the graphic chart. Each value from the data collection would be calculated to the values of mean. Respondents were asked to indicate their opinion on the technical skill, cognitive skill, social-emotional skill and individual work performance as measured by using a five-point Likert scale ranging from 1 (strongly disagree)

to 5 (strongly agree). The result shows that each dimension produced scales in a range of neutral to strongly agree as described in table 1.

Table 1: Descriptive analysis of constructs

Descriptive Profile	Mean
Technical Skills (TS)	3.96
Cognitive Skills (CS)	4.33
Socio-Emotional Skills (SES)	4.40
Individual Work Performance (IWP)	4.54

5.4 Measurement Model Assessment

The results enable the evaluation of internal consistency and indicator reliability of the measurement model used for theoretical constructs. From the analysis of the loadings, it is shown that the value for CR (0.841 to 0.918) are acceptable values ($0.7 \geq$). The same goes for the AVE (0.507 to 0.667) values which present the acceptable value between 0.5 and 0.7. The results shown in Table 2 suggest that all of these criteria are met, thus suggesting that converging validity of the measurement model can be presumed.

Table 2: Factor Loading, Composite Reliability and Average Variance Extracted

Construct	Items	Outer Loading	CR	AVE
Cognitive	CS1	0.800	0.870	0.575
	CS2	0.692		
	CS3	0.669		
	CS4	0.830		
	CS5	0.785		
Social-Emotional	SES1	0.762	0.841	0.514
	SES2	0.855		
	SES3	0.816		
	SES4	0.688		
	SES5	0.767		
Technical	TS1	0.661	0.908	0.667
	TS2	0.878		
	TS3	0.852		
	TS4	0.873		

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	TS5	0.799		
Individual Work Performance	WP1	0.636	0.918	0.507
	WP2	0.683		
	WP3	0.652		
	WP4	0.824		
	WP5	0.649		
	WP6	0.690		
	WP7	0.625		
	WP8	0.788		
	WP9	0.755		
	WP10	0.753		
	WP11	0.746		

5.5 Structural Model Assessment

Three hypotheses were developed to answer the research questions. During the structural analysis of the model, all hypotheses were tested. Based on table 3, the entire hypotheses in this study are supported.

Table 3: Results of Path Analysis and Outcome

Relationship						Decision
	(O)	(M)	(STDEV)	T-Values	P-Values	
<i>H1 Technical skill has a positive relationship with work performance among practicing lawyers.</i>	0.545	0.544	0.069	7.933	0.000	Supported
<i>H2 Cognitive skill has a positive relationship with work performance among practicing lawyers.</i>	0.288	0.293	0.083	3.469	0.000	Supported
<i>H3 Social-Emotional skill has a positive relationship with work</i>	-0.113	-0.114	0.064	1.777	0.038	Supported

*performance among
practicing lawyers.*

There are several studies that achieve the same results which are from (Abbas et al., 2014; Agim & Azolo, 2019; Alkalai, 2004; Mohd Abas et al., 2019; Philosophy & Itsekor, 2012). Thus, the result of the findings might relate to the demographic where majority (65.3%) of the respondents are from the category of young generation (24-45 years old). Barcentewicz, (2021) determines that the old practitioners have the risk of losing their research skills due to the digital era revolution.

On the other hand, there are numbers of literature that suggest several ways for legal practitioners to improve their digital literacy in preparation for the future way of digital working culture (Feigenson et al., 2011; McLachlan & Webley, 2021). This need was mentioned in the literature for the lawyer to learn digital visualization. Digital visualization is the process of manipulating digital tools to present data and information into something that is presentable, concise, and attractive. This is something that will change the legal culture in trying its best to maintain or perhaps generate new meaning under the rule of law in the digital age. This is proven by Azad and Zablith (2021) on how digital visualization brings and aids the frontlines to understand the information better with the representation of video or image that construct the information. The same goes for education institutions, especially scholars. To cope with the low visual literacy in scholarly activity, there is a need to understand visual resources. This means that the process of digital visualisation needs to be exposed and educated to scholar. Visualization is a scholarly activity which rich in opportunities to create knowledge in future (Jessop, 2008)

Besides, the digital literacies can be improved among any professional who has been supported by the authorities to learn digital literacies by taking training, attending the workshop or other activities that encouraged the employee willingness in acquiring digital literacies. For example, an initiative which is highlighted by Okeji et al. (2020) when the Nigeria Ministry of Education sponsors the training for their own staff to encourage them to have digital literacy skills. This concept is supported by (International Bar Association., 2012) that workshops and training activities for legal practitioners will give a good impact on law leaders in cyberspace.

Next, digital literacies increase individual work performance by improving facilities. Legal practitioners already burdened with the actual work in the legal sector, thus it will become more difficult if they need to maintain all the legal resources by themselves. Therefore, the support from the technology facilitates the work of the lawyers. Law firms that implement cloud computing and electronic document and records management system are investing in third parties to maintain the internal data of the information. Hence, the lawyers can get their information without the need to be concerned about how to sustain the materials. They can focus on their own literacy development (Galloway, 2017)

Some legal practitioner's mindset that assumes digital literacy is unnecessary for them as they do not have many legal documents for law and legislation in the digital format. To encourage the utilization of digital literacies, there are initiatives from different countries to create digital information regarding legislation and cases which can

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be accessed freely like Indiankanoon and CmmomLii (Galloway, 2017). In Malaysia, the government starts the initiatives by providing the legislation fully accessible under Attorney General Chamber administrations. With wider accessibility, the legal professional has more reason to use the digital format instead of physically doing the legal research.

6 Conclusions

The purpose of this study is to understand the relationship between digital literacy and individual work performance among practicing lawyers in Malaysia. Based on the model by previous studies, the theoretical framework has been developed to conduct this study which is based on three hypotheses. The study setting is quantitative with non-probability sampling which uses a survey as a research technique. The data received from 271 respondents and all responses have been recorded. The data collected are analyzed using two assessment models which are measurement models and structural models. Based on the result of the data analysis, all hypotheses are supported.

References

- Abbas, J., Muzaffar, A., Mahmood, H. K., Ramzan, M. A., & Ul Hassan Rizvi, S. S. (2014). Impact of technology on performance of employees (a case study on Allied Bank Ltd, Pakistan). *World Applied Sciences Journal*, 29(2), 271–276. <https://doi.org/10.5829/idosi.wasj.2014.29.02.1897>
- Agim, E. C., & Azolo, E. M. (2019). Digital Literacy and Job Performance of 21st Century Library Staff in Imo State. *Library Research Journal*, 15–26. <https://69.167.186.160/index.php/lrj/article/view/547>
- Alkalai, Y. (2004). Digital Literacy: A Conceptual Framework for Survival Skills in the Digital era. *Journal of Educational Multimedia and Hypermedia*, 13(1), 93–106. [http://www.editlib.org/p/4793/%5Cnfiles/364/Eshet and Eshet - 2004 - Digital Literacy A Conceptual Framework for Survi.pdf%5Cnfiles/459/4793.html](http://www.editlib.org/p/4793/%5Cnfiles/364/Eshet%20and%20Eshet%20-%202004%20-%20Digital%20Literacy%20A%20Conceptual%20Framework%20for%20Survival%20Skills.pdf%5Cnfiles/459/4793.html)
- Azad, B., & Zablith, F. (2021). How digital visualizations shape strategy work on the frontlines. *Long Range Planning*, 54(5), 101990. <https://doi.org/10.1016/j.lrp.2020.101990>
- Baharuddin, M. F., Masrek, M. N., Shuhidan, S. M., Razali, M. H., & Rahman, M. S. (2021). Evaluating the Content Validity of Digital Literacy Instrument for School Teachers in Malaysia through Expert Judgement. *International Journal of Emerging Technology and Advanced Engineering*, 11(07), 71–78. <https://doi.org/10.46338/ijetae0721>
- Barcentewicz, M. (2021). Teaching Technology to (Future) Lawyers. *Erasmus Law Review*, 14(1). <https://doi.org/10.5553/elr.000192>
- Bunyamin Ayhan, P. (2016). Digital Literacy. *Digitalization and Society*, 29–48. <https://doi.org/DOI:10.3726/978-3-653-07022-4/10>
- Calvani, A., Cartelli, A., Fini, A., & Ranieri, M. (2008). Models and Instruments for Assessing Digital Competence at School. *Journal of E-Learning and Knowledge Society*, 4(3), 183–193. <https://doi.org/10.20368/1971-8829/288>

- Eshet, Y. (2012). Thinking in the Digital Era : A Revised Model for Digital Literacy. *Issues in Informing Science and Information Technology*, 9, 267–276. <http://iisit.org/Vol9/IISITv9p267-276Eshet021.pdf>
- Feigenson, N., Sherwin, R. K., & Spiesel, C. O. (2011). Law in the Digital Age: How Visual Communication Technologies are Transforming the Practice, Theory, and Teaching of Law. *SSRN Electronic Journal*, 49, 1–58.
- Galloway, K. (2017). A Rationale and Framework for Digital Literacies in Legal Education. *Legal Education Review*, 27(1). <https://doi.org/10.53300/001c.6097>
- Habrat, D. (2020). Legal challenges of digitalization and automation in the context of Industry 4.0. *Procedia Manufacturing*, 51, 938–942. <https://doi.org/10.1016/j.promfg.2020.10.132>
- International Bar Association. (2012). The Impact of Online Social Networking on the Legal Profession and Practice. *International Bar Association*, February, 40. https://www.ibanet.org/Committees/Divisions/Legal_Practice/Impact_of_OSN_on_LegalPractice/Impact_of_OSN_Home%0A%0A
- Jessop, M. (2008). Digital visualization as a scholarly activity. *Literary and Linguistic Computing*, 23(3), 281–293. <https://doi.org/10.1093/lc/fqn016>
- Juriah, A. J., & Shukriah, M. S. (2020). Legal Tech in Legal Service: Challenging the Traditional Legal Landscape in Malaysia. *IJUM Law Journal*, 28((S1)), 279–301. [https://doi.org/10.31436/iiumlj.v28i\(s1\).586](https://doi.org/10.31436/iiumlj.v28i(s1).586)
- Manderino, M., & Castek, J. (2020). Digital Literacies for Disciplinary Learning: Pedagogies Youth Deserve. *Literacy Research, Practice and Evaluation*, 11, 3–15. <https://doi.org/10.1108/s2048-045820200000011003>
- Manovich, L. (2013). Software Takes Command. In *Software Takes Command*. <https://doi.org/10.5040/9781472544988>
- McLachlan, S., & Webley, L. C. (2021). Visualisation of law and legal Process: An opportunity missed. *Information Visualization*, 20(2–3), 192–204. <https://doi.org/10.1177/14738716211012608>
- Mohd Abas, M. K., Yahaya, R. A., & Fee Din, M. S. (2019). Digital Literacy and its Relationship with Employee Performance in the 4IR. *Journal of International Business, Economics and Entrepreneurship*, 4(2), 29. <https://doi.org/10.24191/jibe.v4i2.14312>
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers and Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>
- Okeji, C. C., Nwankwo, N. G., & Emmanuel, O. A. (2020). Assessment of digital literacy skills of 21st century librarians in private university libraries in Ambra state. *International Journal of Library and Information Science Studies*, 6(4), 34–47.
- Philosophy, L., & Itsekor, V. O. (2012). Influence Of Digital Literacy On Career Progression By Centre for Learning Resources Centre for Learning Resources. *Library Philosophy and Practice*, 10–19.
- Phuapan, P., Viriyavejakul, C., & Pimdee, P. (2015). Elements of digital literacy skill: A conceptual analysis. *Asian International Journal of Social Sciences*, 15(4), 88–99. <https://doi.org/10.29139/aijss.20150406>
- Porat, E., Blau, I., & Barak, A. (2018). Measuring digital literacies: Junior high-school students' perceived competencies versus actual performance. *Computers and Education*, 126(May 2017), 23–36. <https://doi.org/10.1016/j.compedu.2018.06.030>

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- Rahman, Ariawan, V. A. N., & Pratiwi, I. M. (2020). *Digital Literacy Abilities of Students in Distance Learning*. 509(Icollite), 592–598. <https://doi.org/10.2991/assehr.k.201215.092>
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617–635. <https://doi.org/10.5465/amj.2010.51468988>
- Roopa, S., & Rani, M. (2012). Questionnaire Designing for a Survey. *Journal of Indian Orthodontic Society*, 46(4_suppl1), 273–277. <https://doi.org/10.1177/0974909820120509s>
- Santoso, H., Abdinagoro, S. B., & Arief, M. (2019). The role of digital literacy in supporting performance through innovative work behavior: The case of indonesia's telecommunications industry. *International Journal of Technology*, 10(8), 1558–1566. <https://doi.org/10.14716/ijtech.v10i8.3432>
- Vodă, A. I., Cautisanu, C., Grădinaru, C., Tănăsescu, C., & de Moraes, G. H. S. M. (2022). Exploring Digital Literacy Skills in Economics and Social Sciences and Humanities Students. *Sustainability (Switzerland)*, 14(5), 1–31. <https://doi.org/10.3390/su14052483>