

WHYTE FUND - RESEARCH GRANT APPLICATION FORM

1. PROJECT SUMMARY

1a. Project Title: Provide a concise and informative title in lay terms (in no more than 20 words).

Systematic Sharing of Tacit Knowledge from Recordkeeping Perspective in Informal Settings: A Cross-Country Study on the Fisherfolk Community

1b. Project Summary: Write a succinct, non-technical summary of the significance and expected impact of the project that would be understood by non-technical specialists. If technical terms are used please provide an explanation of the terms used. (Approximate length 100 words).

Since tacit knowledge contains experience-based knowledge, it is the most challenging type of knowledge to systematically express, record, and share. Recordkeeping, instead, emphasizes efficient and systematic processes for capturing and maintaining information and knowledge in the form of records. Consequently, the existing literature highlights the management of tacit knowledge from a recordkeeping perspective, primarily in formal organizational settings. However, such a process is equally valuable for informal settings like fishing by coastal fisherfolk communities where sharing tacit knowledge is related to sustaining livelihoods. This project explores current practices of sharing tacit knowledge by fisherfolk communities in Bangladesh and Indonesia to scope out a better potential recordkeeping system for this domain combining digital and non-digital tools. As a preliminary qualitative data-driven investigation, the research will enable the investigators to gather data and build collaborations in preparation for a larger project with the ARC (e.g. DP) or alternative funding sources focusing on human-centric design and piloting of the system.

1c. Lead Investigator: Must be an ongoing, contract or adjunct staff member of Monash University. Attach track record and key publications of no more than two pages.

Name:	Dr Tanjila Kanij
Phone Contact:	+61 4 3084 4859
Email:	Tanjila.Kanij@monash.edu
Discipline Group:	HumaniSE Lab, Department of Software Systems & Cybersecurity, FIT

1d. Other Investigator(s). Duplicate this as required and attach track record and key publications of no more than two pages each:

Name: Dr Steve Wright	Name: Dr Md Khalid Hossain	Name: Dr Misita Anwar	Name: Faisal Syafar
Position Title: Senior Lecturer	Position Title: Research Fellow	Position Title: Lecturer	Position Title: Research Collaborator
Institution: Monash University	Institution: Monash University	Institution: Monash University	Institution: Universitas Negeri Makassar
Contact Details: +61 3 9903 2994 steven.wright@monash.edu	Contact Details: +61 4 5082 0437 md.khalid.hossain@monash. edu	Contact Details: +61 4 3041 3323 misita.anwar@monash. edu	Contact Detail: +62 8 123 726 8675 faisal.syafar@unm.ac.id

1e. Duration details

Commencement Date:	1 August 2022
Proposed duration:	31 July 2023

2. RESEARCH PROJECT

In no more than two pages under the following headings, provide a full description of the proposed research or publication project:

• Aims, innovation and significance of the project including expected benefits and outcomes: provide a concise and clear statement of the aims of the project, together with a succinct account of the project's significance, expected benefits and outcomes with reference to advancing research or scholarly publication in librarianship, archives or records management. Examples of expected

benefits and outcomes may include publication(s), plans to attract significant external funding, contribution to the knowledge of the discipline, international collaboration(s) and expected national benefit.

- Methodology (for research projects), research or publication plan and timetable: include a brief outline of the methodology (for a research project), the project plan and timetable. The Committee will need to be convinced of the viability of the methodology for a research project and the feasibility of successful completion in the time frame proposed.
- *Collaboration*: Please provide a brief description of the collaboration and the other investigator's contribution(s) to the project.

Aims, innovation and significance of the project

Fisherfolk communities in developing countries are mostly marginalised and they suffer from poor information management practices. Preliminary survey data of an ongoing joint exploratory study by Monash University and Oxfam in the context of Bangladesh revealed that fisherfolk rely heavily on friends and family for information. This information could be related to nature and climate as well as be important information related to fishing. Often the latter is in the form of tacit knowledge and is difficult to gather. However, to sustain their livelihoods (natural, social, physical, financial, and human), sharing of tacit knowledge is significant for nature-dependent fisherfolk communities around the world.

In this regard, researchers are increasingly paying attention to tacit knowledge as a crucial element in the sharing of ecological knowledge and expertise within fishing communities around the world (Garavito-Bermúdez & Boonstra, 2022¹). From the preliminary research under the PROTIC II research project of Monash University and Oxfam (https://www.monash.edu/it/hcc/dedt/projects/participatory-research-and-ownership-with-technology,-information-and-change-protic-ii), we have found that while some of the fishing-related knowledge is explicit, most of the knowledge is tacit in nature and is passed from generation to generation in a completely non-systematic way. Apprentice fisherfolks learn this knowledge through watching experts doing fishing activities. Not only do relations of power based upon status and gender play a part in this knowledge transfer practice, but ignorance of the importance of the tacit knowledge being transferred to younger generations can also be a critical obstacle. As a consequence, there are times when a lot of the knowledge is lost, and as a result, a gap in knowledge has developed among seniors to juniors. Since the practice has been going on since ancient times, the fisherfolk community does not always realise the importance of the tacit knowledge they possess, nor the limitations of not transferring these properly to upcoming generations. The challenges are more complicated due to the informal nature of the employment within the community which is often the case in many developing countries (Jütting & Laiglesia, 2009⁸).

To overcome these challenges, a good understanding of the role of power relations in the current practice of sharing tacit knowledge is needed. The realization of the fisherfolk community of the importance of the tacit knowledge and the benefits of sharing the knowledge within the community is also important if such knowledge is not to remain restricted simply to particular groups within it. The tacit knowledge-sharing practice can be very localized depending on the region where they are involved in fishing activities (fishing in the coastal area vs small rivers and ponds). Therefore, we plan to conduct co-creation activities in two developing countries - Bangladesh and Indonesia - with the collaboration of local researchers. Both countries have millions of fisherfolks engaged in the fishing industry (Mustika et al., 2021²; Shamsuzzaman et al., 2020³) with versatile fishing conditions.

In this regard, recording and sharing tacit knowledge from a recordkeeping perspective will be highly useful. While focusing on recordkeeping and the capture of tacit knowledge, Sanderson (2001)⁴ indicated the difficulty of successfully capturing and re-using tacit knowledge and emphasized the role of records

¹ Garavito-Bermúdez, D., & Boonstra, W. J. (2022). Knowing through fishing: exploring the connection between fishers' ecological knowledge and fishing styles. Journal of Environmental Planning and Management, 1-20.

² Mustika, P. L. K., Wonneberger, E., Erzini, K., & Pasisingi, N. (2021). Marine megafauna bycatch in artisanal fisheries in Gorontalo, northern Sulawesi (Indonesia): An assessment based on fisher interviews. Ocean & Coastal Management, 208, 105606.

³ Shamsuzzaman, M. M., Mozumder, M. M. H., Mitu, S. J., Ahamad, A. F., & Bhyuian, M. S. (2020). The economic contribution of fish and fish trade in Bangladesh. Aquaculture and Fisheries, 5(4), 174-181.

⁴ Sanderson, M. (2001). Records management and the capture of tacit knowledge. Records Management Journal, 11(1), 7-17.

managers through developing relevant skills and taking responsibility to achieve organisational strategic goals. Chen and Nunes (2019)⁵ in their research found that story-telling and unstructured narratives are the best ways to capture tacit knowledge in the organization, which can be easily managed through electronic records management (ERM). Besides, with the growth of information and communication technology (ICT), literature has been increasingly emphasizing ICT in preserving tacit knowledge while proposing frameworks for managing tacit knowledge from an ICT perspective (AI-Qdah & Salim, 2013⁶; Marcelino et al., 2015⁷). However, it has been found that literature on sharing of tacit knowledge from a recordkeeping perspective along with the use of ICT in this regard is predominantly focusing on formal organisational settings while there are opportunities to explore the same in informal settings (like artisanal fisherfolks' engagement in the fishing industry) where sharing tacit knowledge is highly important.

Considering the above research context, we are proposing to co-create a framework with the fisherfolk community themselves to (1) understand the nature of the tacit knowledge they have and (2) together with them find a better way to systematically record and share this critical knowledge with the whole fisherfolks community. A digital tacit knowledge recordkeeping solution to help with the recordkeeping of this tacit knowledge is of utmost importance and is the ultimate goal to achieve as a result of our proposed co-creation process. The outputs of the proposed project will be a framework to describe the tacit knowledge sharing practice among the fisherfolk community and a list of functional requirements of a digital solution for the recordkeeping of the tacit knowledge. A prototype of the digital solution will be developed based on the collected functional requirements as part of the project. The beneficiaries of the project will be the fisherfolk community who will have a better realization of the importance of the tacit knowledge they have and a systematic way of sharing the tacit knowledge with the help of digital solutions for recordkeeping. The proposed co-creation is an inclusive design and development approach that ensures fisherfolk community members' involvement in preliminary research, requirement engineering, design, and development, and as such, the developed solution has a better chance of adoption by the fisherfolk community.

To our knowledge, there are no such initiatives undertaken thus far to address this issue. The framework will need to carefully take power dimensions, localization of knowledge, and diversity (age, culture, literacy, digital literacy, socio-economic status, gender) into account. A co-creation approach is proposed in this project to actively involve the fisherfolk community in designing both the framework as well as the prototype for the digital solution for recordkeeping of the tacit knowledge. This project will contribute to Monash University's Impact 2030 strategic plan by ensuring the inclusive design of a systematic framework for the recordkeeping of tacit knowledge in an informal setting within thriving communities such as fisherfolks in Bangladesh and Indonesia.

Methodology, research plan and timetable

We propose this research project based on the double diamond approach that structures a project in four phases: discover, define, design, and deliver.

Discover

In this phase, our goal is to understand the nature of the tacit knowledge possessed by the fisherfolk communities in the two countries as well as how those are shared within the respective community. We plan to conduct 16 focus group discussions with the fisherfolks in 4 coastal locations in Bangladesh (Bhola and Cox's Bazar) and Indonesia (2 Regencies of South Sulawesi Province) and 20 key informant interviews (KIIs) with other stakeholders who actively engage with the fisherfolks (10 in Bangladesh and 10 in Indonesia). During the focus group discussions, we will actively engage the participants to design a structured framework (gradually focusing on one attribute at a time) to represent the existing knowledge sharing practice as well as to improve that. We will collect feedback from the participants on each attribute we discuss.

 ⁵ Chen, H., & Nunes, M. B. (2019). Retaining professional tacit knowledge and evidence of experience through electronic records management. IADIS International Journal on Computer Science & Information Systems, 14(2).
⁶ Al-Qdah, M. S., & Salim, J. (2013). A conceptual framework for managing tacit knowledge through ICT perspective. Procedia Technology, 11, 1188-1194.

⁷ Marcelino, I., Góis, J., Laza, R., & Pereira, A. (2015). Using ICT for tacit knowledge preservation in old age. In Ambient Intelligence-Software and Applications (pp. 75-83). Springer, Cham.

⁸J. Jütting & J. de Laiglesia (2009) Is Informal Normal? Towards More and Better Jobs in Developing Countries. OECD: Paris., pp. 11-12)

Define

In this phase, we will analyse the data that we have collected and integrate the gradually developed framework to represent the bigger picture. We will address the comment made by our focus group participants during the co-creation process.

Develop

We aim to co-create and co-develop a digital solution based on this framework. The main purpose of the digital solution is to provide efficient recordkeeping for tacit knowledge. Developing a fully working product is unfeasible given the proposed timeline for this project. Therefore, we will design a proof of concept prototype for this digital solution. In the future, we will carry out a follow-up project to develop a digital solution based on our prototype with larger funding.

Deliver

The prototype will be evaluated with the fisherfolks and necessary adjustments will be made in the follow-up project.

Timeline: The research project will commence on 1 August 2022 and the duration of the entire project will be 1 year. The literature review, questionnaire development, and ethics approval will be done between 1 August and 31 December 2022. Data collection will be done between 1 January and 31 March 2023. Translation, data coding, and data analysis will be done between 1 February and 30 April 2023. The framework and prototype will be developed and initial results will be discussed between 1 May and 30 June 2023. The final research report will be written and submitted by 31 July 2023 and at least 1 journal article will be written based on the research.

Collaboration(s)

To ensure a smooth data collection process in Bangladesh and Indonesia along with data transcription, translation and analysis, there will be research collaboration with two universities in Bangladesh (i.e., Jashore University of Science and Technology) and Indonesia (i.e., State University of Makassar) through two academics from Bangladesh and Indonesia. Mr Md. Arif Chowdhury, who is a Lecturer at the Department of Climate and Disaster of the Jashore University of Science and Technology, will collaborate in the research in Bangladesh. He has experience in conducting similar research in Bangladesh engaging fisherfolks. Mr Faisal Syafar, who is a Senior Lecturer at the Department of Electronics Engineering of the State University of Makassar, will also collaborate in the research in Indonesia. He also has experience in doing similar research on human-centric software engineering. Both Chowdhury and Syafar will be actively engaged in the focus groups and data analysis.

The research project will also collaborate with **Oxfam in Bangladesh** working directly with the fisherfolks to ensure access to data sources and uptake of the research findings. A similar collaboration will be ensured in Indonesia through **Yayasan Mattirotasi** which is engaged in various aspects and dimensions in the field of fisheries and the coastal/coastal environment

3. BUDGET

Budget items must be clearly itemised and justified against the schemes objectives. Please refer to the Monash University salary scales: <u>http://www.adm.monash.edu.au/workplace-policy/remuneration/salaries/</u> for personnel costing.

Detailed Budget Items*	\$
Personnel (Salary plus relevant on-costs to be included)	
(List items here - if a research assistant is required specify the appointment level and	
number of hours/weeks. Investigators' salaries will not be funded.)	
Research Assistant (Casual without doctoral qualification) in Australia	19,960
4 Research Assistants for Data collection in Bangladesh and Indonesia (including per	
diem)	11,520
4 Research Assistants for Data transcription in Bangladesh and Indonesia	960
Subtotal	27,450
Equipment	
(List items)	
Subtotal	0

Travel and other	
(List items)	
Travel for 1 research collaborator from Jashore to 2 field locations by air in Bangladesh	600
Accommodation for 1 research collaborator in the field	990
Honorarium including per diem for 2 research collaborators in Bangladesh and	
Indonesia during data collection in the field	2,304
Local travel cost during data collection and travel to the field in Bangladesh and	
Indonesia	7,520
Travel to Makassar for 1 Australian-based investigator	1,200
Accommodation in Makassar for 1 Australian-based investigator	560
Per diem for 1 Australian-based investigator during trip to Makassar	560
Travel to Dhaka/Makassar for 1 Australian-based investigator – [\$1200 – will be	
contributed to the project by the <u>HumaniSE</u> Lab]	
Accommodation in Dhaka for 1 Australian-based investigator [\$560 – will be contributed	
to the project by the <u>HumaniSE</u> Lab]	
Per diem for 1 Australian-based investigator during trip to Dhaka [\$560 – will be	
contributed to the project by the <u>HumaniSE</u> Lab]	
Time cost for FGD participants	1,536
Time cost for key informants	320
Planning and review meeting costs	320
Subtotal	15,910
TOTAL funds requested in this application	48,350

<u>* If the project is funded from the Whyte Fund. HumaniSE Lab will contribute \$ 2.320 (Australian Dollar Two Thousand Three Hundred and Twenty) to the project</u>

Budget justification

Personnel

Justification for Personnel

1. Research Assistant (Casual without doctoral qualifications) in Australia: \$ 19,960 - At Monash University, one RA will be engaged for 320 hours @\$47.98 per hour + 30% on cost.

2. 4 Research Assistants for Data collection in Bangladesh and Indonesia: \$11,520 - In each country, 2 RAs (one young man and one young woman) will be needed. Each of them will be engaged for 90 days for data collection, field preparation, and data collection-related orientation. For each day's work, they will be paid @\$32 per day which includes per-diem. RAs in Bangladesh will be based in Cox's Bazar and Bhola districts. RAs in Indonesia will be based in Makassar.

3. 4 Research Assistants for Data transcription in Bangladesh and Indonesia: \$960 - 4 RAs will transcribe 36 FGD/KII (each of them will transcribe 9). Each of them will do this in 15 days. For each day, they will be paid @\$16 per day to cover their time engagement.

Equipment

None

Travel and other

1. Return travel for 1 research collaborator in Bangladesh to travel from Dhaka to field locations by air: \$600 - 1 research collaborator will travel to 2 locations by air @\$300 for each return travel.

2. Accommodation for 1 research collaborator in Bangladesh in the field: \$990 - For 7 days visit during data collection, 1 research collaborator will need 9 nights' accommodation in 2 locations and on the way at @\$55 per night.

3. Honorarium including Per diem for 2 research collaborators in Bangladesh and Indonesia during data collection in the field: \$2304 - For 7 days visit during data collection in 4 locations, each research collaborator will need 9 days of engagement including travel to each location and attending consultations @\$64 per day.

4. Local travel cost during data collection and travel to the field: \$7,520 - For 20 days of data collection and field preparation by research assistants and research collaborators in each of the 4 locations, on average @\$94 per day will be needed to pay for motorcycle, microbus, boat etc. in each location.

5. Return flight to Makassar for one of the investigators or for the Australian-based RA to coordinate the project with the Indonesia-based research collaborators: \$1,200.

6. Accommodation in Makassar for 1 Australian-based investigator during the visit – For 7 days visit: 7 nights @\$80 per night: \$560

7. Per diem for 1 Australian-based investigator during the visit in Makassar – For 7 days visit: 7 days @\$80 per day: \$560

8. Return flight to Dhaka for one of the investigators or for the Australian-based RA to coordinate the project with the Bangladesh-based research collaborators: \$1,200 [this amount has not been mentioned in the budget requirement since it will be contributed to the project by the HumaniSE Lab]

9. Accommodation in Dhaka/Makassar for 1 Australian-based investigator during the visit – For 7 days visit: 7 nights @\$80 per night: \$560 [this amount has not been mentioned in the budget requirement since it will be contributed to the project by the HumaniSE Lab]

10. Per diem for 1 Australian-based investigator during the visit in Dhaka/Makassar – For 7 days visit: 7 days @\$80 per day: \$560 [this amount has not been mentioned in the budget requirement since it will be contributed to the project by the HumaniSE Lab]

11. Time cost for FGD participants: \$1,536 - In each location, 12 participants will participate in 4 FGDs (total 192 FGD participants). To cover their time, each of them will be paid \$8.

12. Time cost for key informants: \$320 - In each location, 5 participants will participate in 4 KIIs (total 20 key informants). To cover their time, each of them will be paid \$16.

13. Planning and review meeting costs: \$320 - 10 planning and review meetings between investigators and RAs will cost \$32 for each meeting to cover refreshment costs.

4. CERTIFICATION BY LEAD INVESTIGATOR

I certify that the above named investigators are eligible to apply for this funding and that information provided in this application form and the accompanying documentation is true and correct to the best of my knowledge.

I understand and agree that all research must be carried out in accordance with the Monash University Responsible Conduct of Research Policy.

Signature (Lead Investigator):	Date:
Noma Kong	08.06.2022

Systematic Sharing of Tacit Knowledge from Recordkeeping Perspective in Informal Settings: A Cross-Country Study on the Fisherfolk Community

Fisherfolk communities in developing countries are mostly marginalised and suffer from poor information management practices. Preliminary survey data of an ongoing joint exploratory study by Monash University and Oxfam in Bangladesh revealed that fisherfolk rely heavily on friends and family for information. This information could be related to nature and climate as well as important information related to fishing. Often the latter is in the form of tacit knowledge and is difficult to gather. However, to sustain their livelihoods (natural, social, physical, financial, and human), sharing tacit knowledge is significant for nature-dependent fisherfolk communities around the world.

In this regard, researchers are increasingly paying attention to tacit knowledge as a crucial element in the sharing of ecological knowledge and expertise within fishing communities around the world. From the preliminary research under the PROTIC II research project of Monash University and Oxfam (https://www.monash.edu/it/hcc/dedt/projects/participatoryresearch-and-ownership-with-technology,-information-and-change-protic-ii), Monash university researchers have found that while some of the fishing-related knowledge is explicit, most of the knowledge is tacit in nature and is passed from generation to generation in a completely non-systematic way. Apprentice fisherfolks learn this knowledge through watching experts doing fishing activities. Not only do relations of power based upon status and gender play a part in this knowledge transfer practice, but ignorance of the importance of the tacit knowledge being transferred to younger generations can also be a critical obstacle. As a consequence, there are times when a lot of knowledge is lost, and as a result, a knowledge gap has developed among seniors to juniors. Since the practice has been going on since ancient times, the fisherfolk community does not always realise the importance of the tacit knowledge they possess, nor the limitations of not transferring these properly to upcoming generations. The challenges are more complicated due to the informal nature of the employment within the community which is often the case in many developing countries.

To overcome these challenges, a good understanding of the role of power relations in the current practice of sharing tacit knowledge is needed. The realization of the fisherfolk community of the importance of tacit knowledge and the benefits of sharing the knowledge within the community is also important if such knowledge is not to remain restricted simply to particular groups within it. The tacit knowledge-sharing practice can be very localized depending on the region where they are involved in fishing activities (fishing in the coastal area vs small rivers and ponds). Therefore, we plan to conduct co-creation activities in two developing countries - Bangladesh and Indonesia - with the collaboration of local researchers. Both countries have millions of fisherfolks engaged in the fishing industry with versatile fishing conditions.

Considering the above research context, together with Monash University researchers, the international collaborators are proposing to co-create a framework with the fisherfolk community themselves to (1) understand the nature of the tacit knowledge they have and (2) together with them find a better way to systematically record and share this critical knowledge with the whole fisherfolks community. A digital tacit knowledge recordkeeping

solution to help with the recordkeeping of this tacit knowledge is of utmost importance and is the ultimate goal to achieve as a result of our proposed co-creation process. The outputs of the proposed project will be a framework to describe the tacit knowledge-sharing practice among the fisherfolk community and a list of functional requirements of a digital solution for the recordkeeping of the tacit knowledge. A prototype of the digital solution will be developed based on the collected functional requirements as part of the project. The beneficiaries of the project will be the fisherfolk community who will have a better realization of the importance of the tacit knowledge they have and a systematic way of sharing the tacit knowledge with the help of digital solutions for recordkeeping. The proposed co-creation is an inclusive design and development approach that ensures fisherfolk community members' involvement in preliminary research, requirement engineering, design, and development, and as such, the developed solution has a better chance of adoption by the fisherfolk community.

International Research collaborator contribution (Indonesia)

The international collaborators are involved in all design and development activities, such as protocol design, ethical approval, etc. They will facilitate research assistant and study participant recruitment, lead and support data collection from study participants, take care of payment to research assistants and study participants, and make arrangements for all local travel at respective locations.

(country & research collaborator)	Day/hour	Per day/trip cost/per person	In IDR	No of location	Total (in AUD)	In IDR
			e -			
2	90	32	320,000		5760	57,600,000
2	15	16	160,000		480	4,800,000
			-			-
	0	64	640.000	2	1150	11,520,000
	research collaborator) 2	research collaborator) Day/hour 2 90 2 91 15	research collaborator) Day/hour person 2 90 32 2 90 32 15 16	research collaborator) Day/hour person In IDR In IN I	research collaborator)Day/hourcost/per personIn IDRNo of location29032320,00029032320,00021516160,000	research collaborator)Day/hourcost/per personIn IDRNo of location(in AUD)29032320,000576029032320,00048021516160,000480

Budget to facilitate international research collaborator's contribution (Indonesia)

Indonesia during data collection in the field (for 9 days in each location)							
Local travel cost during data collection and travel to in the 2 field locations for focus groups, other locations for interviews, and coordination meetings (hiring vehicles for 40						2760	
days in total)	1	40	94	940,000	1	3760	37,600,000
Time cost for FGD participants (48							
participants in each of							
the 2 field locations							
paid @AUD 8/IDR							
80,000 per person)	48		8	80,000	2	768	7,680,000
Time cost for Key							
informants (5							
participants in each of							
the 2 field locations							
paid @AUD 16/IDR	6						
160,000 per person)	5		16	160,000	2	160	1,600,000
Other costs				-			-
Planning and review							
meeting costs for 5							
meetings	5		32	320,000	1	160	1,600,000
				-			
Total						12,240	122,400,000

International Research Collaborator in Indonesia

Drs. Ir. Faisal Syafar M.Si., M.InfTech., Ph.D., IPU

University Lecturer, Universitas Negeri Makassar, Indonesia Deputy Dean of Faculty of Engineering for Research, Innovation and Partnership Email: faisal.syafar@unm.ac.id

Selected Research Projects

- Real time communication on uninhabited air bone vehicles based surveillance
 - Source: AuSAid, Australia Fund: 115,000.00 IDR, 2013
- Mobile collaboration technology implementation in Engineering asset organizations
 - Source: Cooperative Research Centre for Infrastructure and Engineering Asset Management Australia, Fund: 480,000.00, 2014
- Data and Information Quality of Higher Education Assets in Makassar, Indonesia

- o Source: PNBP-UNM, Indonesia Fund: 11,000.00 2017
- Framework Development of Quality of Big Data and Information Analytic in Higher Education During and After COVID-19 Pandemic
 - Source: Ministry of Education, Indonesia, Fund: 62,000.00, 2019-2021
 - Smart Farm 4.0 Design based IoT
 - o Source: Ministry of Education, Indonesia, Fund: 39,467.00, 2021-2023

Selected Publication

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No.	Title	Volume/ Number/ Year	Journal Name	Indexing
1	Development of an Integrated Framework for Successful Adoption and Implementation of Mobile Collaboration Technology in Healthcare	Accepted, Paper ID# 885684 (2015)	Journal of e-Health Management	Proquest, EBSCO, Google Scholar
2	The Success Implementation Factors for Mobile Collaboration Technology in Asset Maintenance	Published, 2015 (2015) DOI: 10.5171/2015.4 59687	Journal of Mobile Technologies, Knowledge & Society,	Proquest, EBSCO, Google Scholar
3	Building a Framework for Improving Mobile Collaborative Maintenance in Engineering Asset Organisations	Published, 2013 (2013) DOI: 10.5171/2013.7 24542	Journal of Mobile Technologies, Knowledge & Society,	Proquest, EBSCO, Google Scholar
4	Exploring the factors influencing student's intention to use mobile learning in Indonesia higher education	25/3/2020. DOI: 10.1007/s1063 9-019-10018-0	Education and Information Technologies	Scopus
5	The Role of Big Data Quality and Information Analytics in Indonesia Higher Education Sector During Covid-19 Pandemic	Volume 6, 2020	International Journal of New Technology and Research	Copernicus, CrossReff
6	Mobile Technology to Offer Real Time Support for Remote Expert and Maintenance Collaboration	Volume 30, 2021	Computer Supported Cooperative Work	Scopus, WoS
7	International Consensus on Data and Information Quality for Better Quality Decision Making in Higher Education Institutions	Volume 37, No. 2, 2022	International Journal of Productivity and Quality Management	Scopus, WoS
8	Smart Chicken Poultry Farm Using IoT Techniques	Volume 7, No. 10, 2021	International Journal of New Technology and Research	Copernicus, CrossReff

Payment details

Name: Dr. Faisal, M.Si.

A/C no: 809478478

Bank: BNI

Signed

ml (

Date: October 26, 2022



Date: Vendor No: 9926 Reference:

17.01.2023 2023/2001656563

Remittance Advice

Dr Faisal, M.Si. alamat Jalan Daeng Tata Raya Parangtambung makassar **INDONESIA**

> This remittance advice details the electronic payment to be credited to your bank account. If you have any queries, please phone (03) 9902 0900.

Invoice Date	Invoice Number and Description	Invoice Amount	Deduction Amount	Amount Paid
16.12.2022	16122022 1900587972	12,240.00	0.00	12,240.00
		Total Payment	AUD	12,240.00
		Total Fayment	AUD	12,240.00

CLAYTON CAMPUS

WELLINGTON ROAD CLAYTON VICTORIA 3800 AUSTRALIA FAX +61 3 9905 4007 PHONE +61 3 9902 6000

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