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TALENT-STACKING AND WHY WE NEED A RANGE OF SKILLS

Assistant Professor Dr Alwyn Lau

I have a former colleague who had an impressive set of skills. She was a great lecturer (all her students loved her) but she was also very eloquent and had lots of stories to tell, so she was often the first choice for emcee-ing at formal events. Interestingly enough, she also knew some photography, so she was also sought after by the Marketing department for input on brochures, posters, etc. Finally, she was a warm people person, so sometimes other heads of departments would seek her help to speak to 'difficult' people.

She had a PhD in Engineering, so that was—at least formally—her main expertise. But she was not a great MC, nor the world's best photographer (in fact, like many folks, she learnt photography from YouTube), nor did she have a degree in Counselling. Nevertheless the combination of her engineering knowledge, plus all those other skills which she had 'a little bit of', added up to something unique, extraordinary and powerful: **A kick-ass talent-stack which made her the darling of her company.**

The concept of talent stack was coined by Dilbert creator, Scott Adams. This is the idea that you can combine many 'normal'-level skills you possess to produce something no one else has. Adams himself blended his only-slightly-abovepar art skills with his sense of humour, risk-taking and work ethic to produce the world-famous comic-strip.

He's also merged his unique reading of U.S. socio-political events with psychological heuristics to produce about four or five best-sellers (his latest being LoserThink, New York: Portfolio, 2019 which discusses a list of popular errors of reasoning and perception).

Certainly, this concept isn't new. Many Malaysian parents, for similar reasons, send their children to piano or ballet classes; the constant emphasis for students being good in all school subjects also sounds, at least superficially, similar to talent-stacking.

But there's a critical difference: Talent stacking is more about your range of skills than it is about your expertise in any one of them (see note 1).

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Figure 1: Talent Stacking

The thing about most Asian parents is we expect our kids to excel in everything they do. Not only does this breed chronic stress, it also downplays the value of mere exposure without the need to win scholarships or awards.

Likewise, in the universe of talent-stacks, having a PhD in Biology is not as welcomed as, say, having two Masters degrees (perhaps one in Computer Engineering and another in Political Philosophy—no point having two postgraduates degrees in fields so close to each other, might as well just do a PhD).

The key here is breaking the trap of **domain-dependency** i.e. you're not limited to working in one specific area. Plus, you can draw on competences from multiple spheres to offer something unique.

Another friend of mine I knew during my consulting days aptly mixed his project management skills (the chief requirements of firms like Ernst & Young) with his negotiation skills (honed from many years buying and selling cars) plus a weird sense of humor (honed from many years in bars) to become a clear stand-out in the firm. Again, he wasn't the best project manager, nor the best negotiator, nor (by a long shot) anywhere near Jason Leong when it comes to comedy (see note 2).

But the combination of all three skills, stacked together, turned him into a strong player both in the firm and in the sector as a whole.

Talent-stacking for post-pandemic times

I'm no HR expert or "Talent Management Specialist" and I don't wish to sound pedestrian or trite to anyone struggling with unemployment.

I only hope that to offer some humble advice for all of us to do whatever we can, to use whatever we skills we have at our disposal, to try to merge or unite all our barely-above-par qualities to yield something special, something few others have.

I also wish to remind bosses and employers to try to go beyond the CV skills, but to look for the multiple talents which existing or potential staff may have. Try to look at the unique nature of the staff we have. My prayer is that this will create win-win scenarios in which the company gets to benefit from its staff various and compounded abilities and people get to keep their jobs.

Note 1: A recent book which emphasizes the power of diversity is one's skillset is David Epstein's Range (New York: Macmillan, 2019) which, among other things, challenges Malcolm Gladwell's "10,000 hours" thesis. Epstein shows that many high-achievers tend to specialise late, thus avoiding 'cognitive entrenchment' by opening themselves up to multiple domains of learning.

Note 2: Some people may object to speaking of humor as a skill. But, seriously, have you tried making people laugh on cue? Most people's comedic talents are limited to sharing funny memes. 'Nuff said.



Assistant Professor Dr Alwyn Lau is a lecturer in the Mass Communication Department, Faculty of Social Sciences and Liberal Arts where he teaches Media Studies, Marketing, etc. His career includes stints in the training and management consulting sector. He is also a columnist for The Malay Mail.



WORLD INVENTION OLYMPIAD FIAR (WIOF 2022) GOLD MEDALIST AND SPECIAL AWARD

Invention Title: Critical Success Factors (CSF) OF eTendering Implementation Model in Construction Industry

Researchers: Ts Sr Khoo Sui Lai and Ts Sr Dr Nadzirah Hj Zainordin (School of Architecture & Built Environment, UCSI University), Assistant Professor Dr Felicia Yong Yan Yan (LKCFE, UTAR University)

Award Synopsis:

Motive & Purpose for Creating Invention

In the process of globalization, the construction industry is focusing on digitalization, especially digital construction. The construction industry is advancing along with Industrial Revolution 4.0 and digital construction by adopting an implementation of e-procurement that also acts as a digital or collaborative system in the e-procurement of contractors suitable for construction projects.

Looking at the practice of the construction sector, the bidding process is traditional. Otherwise, the process is partially electronic, bid notifications are published via online platforms or websites, and bid evaluations and reports are done manually. The entire bidding process, that is, electronic bidding in the construction industry, needs to be virtually conducted. In addition, all research done by previous researchers is based on eProcurement, which is widely used in the supply chain of goods and services, rather than eTendering for construction projects. Despite the fact that eTendering can bring benefits, recruitment in the construction sector is not desirable because organizations does not want to move from traditional practices to technical practices or focus on post-recruitment. It's still slow compared to the manufacturing and service departments. In addition, construction activities are more complex and his responsibility to facilitate and implement electronic procurement in procurement procedures, especially in the bidding process can be costly. Implementations of eTendering for construction projects began many years ago around the world, but implementations vary from country to country.

Characteristics & Creative Features of Invention

Bidding is the process of selecting the right contractor to meet your client's preferences for a project, within the budget and duration of the project and the expected quality. The traditional design of the bidding process sends a large amount of paper-based information contained in drawings and bidding documents to share it among members of the construction project team. When construction personnel are expected to move from traditional practices to Industrial Revolution 4.0 (IR 4.0) practices. Contractors have received printed versions of bidding documents since the 1980s, and in 2000 received compact disc (CD) -based storage versions. Until recently, we have begun to move to a web-based collaboration platform under IR4.0. However, the implementation is still minimal. eTendering is more efficient and cost-effective with the extensive development of eTendering, which transforms traditional procurement methods into Internet-based systems and provides a sophisticated, standardized platform accessible via computers and smart devices. Making it a thing.



Ts Sr Khoo Sui Lai



Ts Sr Dr Nadzirah Hj Zainordin



Critical Success Factor (CSF) is specifically for the construction industry as the key features and infrastructure that influence success, as well as the core components needed to initiate and support the implementation of eTendering. CSF is an indicator of the opportunities, factors, or conditions needed to achieve the goals within a project. The eTendering implementation of CSF can be divided into five main themes: people, processes, work environment, technology, and service providers, as shown in the figure.

Contribution & Marketability of Invention

As mentioned about eTendering, it requires a digital platform where the security concern on the data provided comes as a significant concern. That is where the standardisation and fixed regulation must be in place so that all parties involved in this eTendering are protected.

By speaking about conducting and even practising eTendering, the inaccuracy may occur due to various issues ranging from human carelessness. Numerous companies employ additional resources to ensure and enhance the quality of works. Construction tendering is looking forward to a shorter, systematic and reliable tendering process. CSF of eTendering implementation in construction projects is essential to ensure project success. This model further enhances the tendering process in many ways, especially when construction activities are more complex than services or goods procurement. These CSF are the factors determined to ensure the success of the eTendering implementation in construction projects. The user can use these factors to guide the eTendering implementation for the construction projects.

The specific application in the CSF eTendering Implementation Model towards improving the construction project as follows:

- to enhance the current guideline on eTendering initiatives, framework and policies;
- to integrate into the construction technology strategic plan;
- to improvise the current practices due to unprecedented phenomenon affected;
- to induce the implementation of eTendering into the potential new construction projects.



Figure 2: Critical Success Factors (CSF) OF eTendering Implementation Model in Construction Industry





Figure 1: Gold Medal and Special Award Certificate



THRESHOLD OF ANISOMETROPIA AS A GUIDELINE TO PREVENT AMBLYOPIA Assistant Professor Dr Adilah Mohd Ali and Ms Phang Siew Bing



Figure 1: Anisometropia or 'Lazy Eye'

Anisometropia is an eye condition whereby there is a difference in refractive error between the right and left eye of more than 1.00 dioptre (1). This condition can be classified into Myopic Anisometropia (MA), Hyperopic Anisometropia (HA) and Astigmatic Anisometropia (AST-Aniso). A severe anisometropia increases the chance of developing binocular vision disorders including aniseikonia, amblyopia, strabismus, and reduced stereoacuity. Early detection of anisometropia particularly among children is crucial so that early intervention can be taken to avoid permanent visual deficit. Studies on the prevalence of refractive errors in Malaysia revealed that anisometropia is the least prevalent refractive error which only accounts for 0.7% to 7.7% among all types of refractive error (2-4) and the prevalence of HA is higher than MA (5-7).

Even though the prevalence of anisometropia is the lowest compared to other refractive errors, researchers (4) suggest that anisometropia needs to be treated earlier than regular myopia and hyperopia to prevent development of amblyopia and other binocular vision anomalies.

Amblyopia, or lazy eye, is a reduced vision even after the best vision correction due to unequal visual stimulation between the two eyes (8). Most authors define amblyopia as the best corrected visual acuity of 6/9 or less (9-12). In Malaysia, the prevalence of amblyopia is reported to be 7.53% (3) and 25.2% of it was caused by anisometropia (13). The prevalence of anisometropia is higher among amblyopic individuals compared to non-amblyopics (5,6). Amblyopia starts during childhood but is usually asymptomatic causing a delay in receiving treatment. The success of amblyopia treatment depends on the patient's age, thus it is vital to be aware of the risk factors of amblyopia and manage them to prevent permanent vision disorders (14). There is a controversy on the amount of anisometropia that may cause amblyopia, and this creates a confusion on the best time to treat anisometropia for amblyopia prevention. This review was conducted to gather and summarize data from previous studies to find out the amount and types of anisometropia that may cause amblyopia. Information provided in this review can be a guideline for optometrists and patients about the threshold values of different types of anisometropia that will result in amblyopia, to allow early intervention hence better prevention of permanent vision disorders. There were 30 papers published in between 2005 and 2021 included in this review by extraction from Google Scholar, PubMed, Science Direct and Elsevier databases.

Based on the review, the number of articles showing the amount of different types of anisometropia that can cause amblyopia was counted and displayed in Table 1 below. Note that the threshold of HA resulting in amblyopia is the lowest compared to other anisometropia types (15-18) and only three papers indicate that anisometropia of <1.00D has potential in causing amblyopia. Another three studies show that anisometropia is associated with amblyopia when the power difference between two eyes is \geq 1.00D without specifying the type of anisometropia (19-21).



Table 1: Number of articles with amounts of different types of anisometropia that can cause amblyopia.

	≥0.25	≥0.50	≥1.00	≥1.50	≥2.00	≥3.00
Unspecified			3			
MA	1		2	1	2	2
HA		1	4	2	1	
AST- <u>Aniso</u>	1		3	3	3	

The American Optometric Association (AOA) suggests that an anisometropia has the potential to cause amblyopia when its amount is \geq 3.00D for MA and \geq 1.00D for HA (22). The American Academy of Optometry (AAO) has different criteria to treat amblyopia which are ≥2.00D and ≥1.50D of MA and HA, respectively (18), whilst American Association for Pediatric Ophthalmology and Strabismus (AAPOS) states that anisometropia should be corrected when the amount is \geq 1.50D regardless of the type (23). The current review shows that the threshold amount of HA causing amblyopia is the lowest among all types of anisometropia, and this is consistent with statement by AOA and AAO. Most studies showed that amblyopia will develop when the HA amount is \geq 1.00D (15-17,21) and \geq 1.50D (18,24) while only one study states that even HA of ≥0.50D may result in amblyopia (25). The lower threshold and higher risk of developing amblyopia among HA individuals compared to MA (15-18) is because HA gives more significant effect on visual system during childhood leading to disrupted binocular vision during that critical period. This is because children tend to accommodate to the better eye and this will cause the poorer eye to remain unfocused because accommodation is a binocular phenomenon (26). The prevalence of amblyopia is low among MA compared to HA because the more myopic eye is used to see objects at near and the less myopic eye is used to view at distance hence both eye are used and amblyopia is avoided. The person with HA uses the better eye for fixation at all distances, thus the more hyperopic eye never receives a clear image, hence results in amblyopia (27).

In a nutshell, anisometropia is defined as an unequal refractive errors between two eyes. It causes amblyopia in a way that the foveal resolution is decreased in the poorer eye. Children with anisometropic amblyopia are difficult to detect as their physical appearance is normal unlike strabismic amblyopia in which the eye is deviated and can be recognized easily. Therefore, they often missed the treatment during the critical period which is around 7 to 8 years-old (20). Anisometropia needs to be managed early in young children to improve their vision and reduce the probability for permanent disorders, thus it is vital to be aware of the risk factor of amblyopia so that management can be given to prevent disruption in binocular vision. The current review indicates that the threshold of anisometropia that will result in amblyopia is lower than the guideline provided by AOA, AAO-PPP and AAPOS. Moreover, HA is shown to have higher risk to be associated with amblyopia compared to other types of anisometropia similar to suggestion by AOA and AAO-PPP. Hence, optometrists are advised to correct anisometropia even when the amount of anisometropia is <1.00D to prevent the development of amblyopia.

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PHARMACOLOGICAL STUDIES OF CLINACANTHUS NUTANS (BURM. F.) LINDAU TRADITIONAL USE ON ALLERGY: IN VITRO AND IN VIVO EVIDENCE Dr Audrey Kow Siew Foong

Allergy can be mediated via two pathways. The most commonly known pathway is the crosslinking of immunoglobulins (Ig) -E to their respective receptors. The lesser-known pathway involves the crosslinking of IgG with their receptors. These crosslinking will lead to the degranulation of mast cells, macrophages, basophils or neutrophils and the eventual release of allergy-causing mediators. In order to resolve allergy, these mediators – histamine, platelet-activating factor (PAF) and interleukins (ILs) have to be removed from the system or brought back to their minimal level. *Clinacanthus nutans* is an herbal plant found in Southeast Asia. It had been traditionally used to treat skin rash, herpes zoster virus, and many more. In this study, it was discovered that *Clinacanthus nutans* leaf water extract has a potential anti-allergy effect against the IgG pathway instead of the IgE pathway.



Dr Audrey Kow Siew Foong



Figure 1: Clinacanthus nutans plant (Personal collection, 2018)

In vitro evaluations on the anti-allergy effect of *Clinacanthus nutans* leaf water extract was performed on rat basophilic leukemic cells (RBL-2H3) and IC-21 macrophages in the IgE-mast cell degranulation model and IgG-induced macrophage activation model respectively. Based on our analysis, the extract was able to suppress the release of both β-hexosaminidase and histamine levels in the IgE model at concentrations above 5 mg/mL. However, it could not suppress the release of interleukin-4 (IL-4) and tumor necrosis factor-alpha (TNF-α). The results of this finding were published in the Pharmacognosy Magazine. An analysis on the IgG pathway was then performed and it revealed that the *Clinacanthus nutans* leaf water extract was able to significantly suppress the levels of IL-6 and TNF-α at 1.75 mg/mL. A further analysis on the ERK 1/2 phosphorylation.



In vivo studies were also carried out to evaluate C. nutans leaf water extract's anti-allergy activity in a biological system. Prior to conducting these evaluations, the toxicity of the extract was determined. In the acute toxicity testing with a single dose of 5000 mg/mL of the extract, all female Sprague-Dawley rats tested survived the 14 days evaluation. The rodents did not display any signs of toxicity in all areas evaluated – physical, hematological, histological and even metabolomics. Hence, it was concluded that at a single dose of 5000 mg/mL of C. nutans leaf water extract was not toxic to the animals. These results were presented in the Molecules journal. Following that, the anti-allergy effect of the extract was evaluated in three models of anaphylaxis. A general systemic anaphylaxis model using ovalbumin was first used to determine the anti-allergy effect of the extract. Ovalbumin was used as it could activate both the IgE and IgG pathways of allergy. In this study, the extract was found to inhibit the release of IgG, PAF and IL-6 but not IgE. These findings were also supported by the plasma and urine metabolite study by our group which showed protection of the animals from anaphylaxis. The 1H-NMR metabolomics analysis revealed that C. nutans leaf water extract alleviated ovalbumininduced anaphylaxis through the downregulation of lipid metabolism, carbohydrate and signal transduction system up-regulation of citrate cycle intermediates, and propanoate metabolism, amino acid metabolism and nucleotide. These results were presented in the Journal of Pharmaceutical and Biomedical Analysis. However, we still

could not conclude with specificity which pathway the extract was conferring its protection. Hence, two passive anaphylaxis models were employed for further analysis. In the IgE-challenged passive systemic anaphylaxis (PSA) model, only the IgE pathway will be activated while in the IgG-challenged PSA model, only the IgG pathway is activated.



Figure 2: Pathways of allergy [Finkelman, F. D., Rothenberg, M. E., Brandt, E. B., Morris, S. C., & Strait, R. T. (2005). Molecular Mechanisms of Anaphylaxis: Lessons from Studies with Murine Models. Journal of Allergy and Clinical Immunology, 115, pp. 449–457]

Our in vivo analysis supported our in vitro analysis whereby C. nutans leaf water extract's anti-allergy effect was on the IgG pathway. In the IgE-PSA model, the extract could not suppress the levels of histamine, IL-4 and leukotrienes C4 at all doses tested. On the other hand, the extract significantly suppressed the levels of PAF and IL-6 in the IgG-PSA model. Hence, based on the in vitro and in vivo analysis, it was concluded that C. *nutans* leaf water extract does possess an anti-allergy effect and its protection was on the IgG pathway of allergy. These findings are currently being peerreviewed. This PhD study was supported by the Ministry of Agriculture and Agro-based Industry Malaysia NRGS scheme grant (NH1014D067) and under the supervision of Associate Professor Dr Tham Chau Ling, Professor Dr Daud Ahmad Israf and Professor Dr Faridah Abbas from Universiti Putra Malaysia; and Associate Professor Dr Lee Ming Tatt from UCSI University.



FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2021: MECHANISTIC UNDERSTANDING AND EVALUATION OF ANTI-INFLAMMATORY, TOXICITY AND WOUND HEALING ACTIVITIES OF CASSIA ALATA LEAVES POLYPHENOLS USING ATOPIC DERMATITIS MODELS



Assistant Professor Dr Chew Yik Ling

Atopic dermatitis (AD) is a common skin disorder that commonly happens all around the world, and the prevalence rate is rising. 15 - 30% of children and 2-10% of adults had been reported in developed countries. The prevalence of atopic eczema in Malaysia and Singapore is about 20 %. And the statistics are rising annually. 90 % of the patients developing the condition before age of 5 . This disease is not contagious, but it causes the skin to become dry, red and itchy. It can occur at any age, but it is common among infants and children, where 90 % of the patients developing the condition before age of 5. This skin disorder is a relapsingremitting condition which flares-up periodically when the skin is triggered by allergens, irritant chemicals and stress.

Topical corticosteroids are the first-line therapy for AD. They are formulated in creams, ointments, gels and lotions with known amount of corticosteroids and hormones which possess anti-inflammatory, vasoconstriction and immunosuppressant properties. A survey conducted in Southeast Asia in 2006 had reported that 91–100 % of patients are using topical corticosteroids in managing AD. However, prolong topical

corticosteroid exposure could induce various side effects such as local irritation, atrophy changes, telangiectasia, striae, purpura and stellate pseudoscars, hyper/hypopigmentation, and rosacea. Although non-steroid treatment such as pimecrolimus, tacrolimus, antihistamine are available, these treatments has side effects. Increase and prolong use of topical pimecrolimus and tacrolimus are often associated with some side effects including burning, warmth, stinging, soreness, redness of the skin areas and many more. Topical pimecrolimus and tacrolimus have also been associated with the increased risk of lymphoma. Topical application antihistamine in large skin areas may cause drowsiness, localised burning and developed allergic contact dermatitis.

Cassia alata leaves, in Malay is known as "*daun gelenggeng*" has been traditionally used in the management of skin infections and disorders. Various creams, balms and soaps with *C. alata* leaves extract have been developed by homebased skin care producers, which claimed that their products are effective towards wide range of skin disorders, such as fungal infection, psoriasis, rashes and AD. The effectiveness, allergenic, and toxicity of these products were not evaluated. The underlying mechanism of C. alata in managing AD is also uncovered as no study was done on skin/AD models. Hence, it can be said that the effectiveness, mechanism of actions, active ingredients, and toxicity of C. alata are effective in managing the skin inflammation in AD, and the mechanism of action involved.



FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2021: ELUCIDATING THE UNDERLYING ROLE OF INPUT DATA UNCERTAINTY ON THE ACCURACY OF DROUGHT FORECASTING MODELS

Drought is a natural disaster that influences ecosystems and the life of human beings. Consequently, researches on drought analysis has increased over the years. Nevertheless, input data might contain hidden errors and may cause the reliability of the model questionable and increase system failure. The presence of input data uncertainty poses a risk wards theoretical decision makings as the forecasted results will contain errors which may lead to costly mitigation strategies. Also, the assessment on input data uncertainty is often overlooked in practice. It is hypothesized that input data uncertainty will increase the confidence interval length and standard deviation of drought indices, alter the drought trends, and thus reducing the accuracy of the drought forecasting model. The objective of this project is to elucidate the effects of input data uncertainty on the hybrid drought forecasting models. The effects of input data uncertainty will be correlated to the temporal and spatial trends of drought. The bootstrap resampling method will be used to produce the resampled input data. The effects of input data uncertainty on the drought trends, indices, and forecasting results will be investigated via the lower and upper bound of confidence intervals. It is expected that the accuracy of drought forecasting models will increase by



Assistant Professor Ts Dr Ng Jing Lin

taking input data uncertainty into consideration. This project provides a fundamental theory towards the development of a drought forecasting model with higher accuracy, fewer errors and exhibits high efficiency for better forecasting performances. The project outcomes can reduce the disaster risk, boost economic growth and promote a sustainable environment.



CURRENT RESEARCH GRANT CALL, EXHIBITION AND SYMPOSIUM

No.	Funding Scheme	Endorsement by CERVIE	Submission Closing Date	
1	Malaysia Grand Challenge, MOSTI			
	Applied Innovation Fund (AIF)	0.000 0.00	Onen ne	
	Technology Development 1 Fund (TeD 1)	closing date as	open, no	
	Bridging Fund (BGF)	for now	for now	
	MOSTI combatting COVID-19 Fund		ior now	
	URL link: https://edana.mosti.gov.my/			
2	Industry Linkage Fund (ILF) research grant from Malaysian Rubber Council (MRC)			
	URL link: https://www.myrubbercouncil.com/industrylinkagefund/			
3	National Conservation Trust Fund for Natural Resources (NCTF)			
	URL link: https://www.ketsa.gov.my/en-my/KetsaCore/Biodiversity/Pages/nctf.aspx			
No.	Exhibition(s)	Submission Closing Date		
1	MTE 2022 Sustainable Development Goals International Innovation Awards (SDGIIA) URL:	17 – 21 Oct 2022		
-	https://mte.org.my/			
No.	Symposium(s)		Abstract Submission Closing	
		Date		
1	Asian Federation of Biotechnology Malaysia Chapter International Symposium 2022 (AFOBMCIS 2022)			
	Date: 18 – 21 September 2022	NA		
	URL link: https://www.istr.org/general/custom.asp?page=AsiaPacific			

Please refer to your respective Head of Research for more information.

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