

Resisting technological solutionism in open universities in the time of global digital convergence

David C.L. Lim, Hamidah Mat and Fatimah Yusoff
*Faculty of Social Sciences and Humanities, Open University Malaysia,
Petaling Jaya, Malaysia*

Abstract

Purpose – This purpose of this paper is to explore the future of open universities (OUs), particularly in developing Asia, focusing on the potential risks associated with technological solutionism, or the popular belief that educational problems can be readily solved through technological means. This exploration is pertinent as the initial advantages that OUs once held have significantly diminished and competing higher education institutions worldwide are converging on a digital future.

Design/methodology/approach – The qualitative method of empathy-based stories (MEBS) was employed as the primary research method for drawing data from sampled OU teachers. The obtained data were parsed via textual analysis and the lens of critical discourses on technology and higher education.

Findings – The study shows that, in the future envisioned by the sampled OU teachers, students' lack of privileged access to frontier technologies is no barrier to learning success. It also emphasises that learning outcomes have causality beyond technological determinism, and that educational problems, which OUs may deem as requiring technological solutions, are often non-technological in nature and require no technological fixes.

Originality/value – Critiques of techno-solutionism, such as the present study, are virtually absent in the context of OUs in developing Asia. For this very reason, this study is vital and serves as a guardrail while these OUs seek to reformulate their respective value propositions in the time of global digital convergence.

Keywords Digitalization, Digital convergence, Technological solutionism, Method of empathy-based stories (MEBS), Open universities

Paper type Research paper

1. Introduction: the convergence, the digital, and the future of OUs

This paper explores the future of open universities (OUs), particularly in developing Asia, at a time when higher education institutions globally are converging on a digital future. Open and conventional, universities across types are increasingly committing to and investing in a digital future that compels them to not only engrain the latest digital technologies into the

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This is a revised version of an earlier paper titled "Problematizing Technological Solutionism in Open Universities: Perspectives Drawn Using the Method of Empathy-Based Stories (MEBS)" presented at the 36th Annual Conference of the Asian Association of Open Universities held in Istanbul, Turkey, on 28-30 September 2023, and published in the *35th Annual Conference of the Asian Association of Open Universities Proceedings Book* in December 2023 (pp. 565-578).

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education they provide, but also to undergo a more profound “digital transformation” that has been described as a “series of deep and coordinated culture, workforce and technology shifts that enable new educational and operating models and transform an institution’s operations, strategic directions and value proposition” (Grajek and Reinitz, 2019). One effect of the convergence is that it has given OUs cause for an existential crisis, even if the effect is not uniformly experienced or encountered in the same intensity by all. Not only have OUs’ first-mover advantage been “substantially eroded” (Tait, 2018, p. 13) by an increasing number of conventional universities leveraging on the same digital technologies to offer competing courses and even entire programmes in the online and distance learning mode pioneered by OUs, thus eating into their traditional market share and threatening their fiscal bottom-line, they also have to now compete in a costly technology race with the conventional universities, many of which are sufficiently well-resourced to out-technologize their competitors.

Against the foregoing background, this paper seeks to answer the following research questions. First, in the future of higher education that is expected to be radically transformed by and dependent on technological advances, what specific technologies are envisioned as the key enablers of learning success, and what might these speculations reveal about the ideologies shaping the present? Second, in such a future, is learning success even thinkable for learners who can only afford access to “low to no tech” resources, which is the best that many leanly-resourced OUs can provide to keep education affordable; and if it is thinkable, what plausible advantage might these learners have or develop over their peers with privileged access to frontier technologies provided by their well-endowed universities? And, third, what lessons might the answers to the foregoing questions provide OU stakeholders, especially in developing Asia, as they rethink the operations, strategic directions, and value proposition of their respective institutions amid the rise of technological solutionism, that is, the popular belief that technological solutions can readily address complex challenges such as education? To answer these questions, this paper drew on speculations of the future by OU teachers using the method of empathy-based stories (MEBS) and parsed them using the method of textual analysis and the lens of critical discourses on technology and higher education.

To unpack the issues thrown up in the above sketch, it is worth recalling the argument made by Tait and Mills (1999) over two decades ago that remains as relevant today: if information and communication technologies (ICTs) were what gave OUs the means to scale their provision of higher education in open and distance mode (before the conventional universities began to leverage them and diminish the OU lead), they are also that which is at the centre of the solution that will determine the future success or failure of OUs (and indeed all educational institutions). To be clear, digital technologies, as a latter-day term for ICT, are not proffered as a standalone panacea in and of itself; Tait (2018) reiterates this crucial but easily-missed point when he writes that, to validate their continued existence, OUs will need to deliver “a substantive new proposition that once again combines vision and mission with new technology assemblages and combinations, which was essentially the brilliance of the early Open University model” (2018, p. 20). To wit, technology is but part of the formula co-created in relation to the OU’s vision and mission which have historically and culturally been to provide the underserved access to quality higher education at affordable costs. What is required, in other words, is a new proposition that rethinks technology in education in sociotechnical terms. To think sociotechnically is to think of educational outcomes associated with digital technologies *not* as “the essential properties of the technology *per se*” but as “influenced heavily by the local contexts and cultures that these technologies are used in” (Facer and Selwyn, 2021, pp. 8–9). To think sociotechnically is also to conceive of technology as potentially useful without treating it as the overriding force of necessary good that drives history and change. To fall short of thinking sociotechnically in this way is to risk

sliding towards technological solutionism and detracting from the sustainability of OUs in the future.

Coined by [Morozov \(2013\)](#) and commonly abbreviated as techno-solutionism, technological solutionism has been defined as “an unhealthy preoccupation with sexy, monumental” (p. 6) responses to “complex social situations” that are reductively represented as “neatly defined problems with definite, computable solutions” (p. 5). Techno-solutionism approaches educational problems as puzzles to which there are ready technological solutions and fixes ([Selwyn, 2022](#), p. 201), overlooking how what it presumes to be “‘problems’ in need of solving” may not be problems at all and may even be “virtues in disguise” ([Morozov, 2013](#), p. 6). In western scholarship, critiques that problematise the creeping trend towards techno-solutionism in both general and educational contexts are accumulating (see, for, e.g. [Morozov, 2013](#); [Morozov, 2022](#); [Castaneda and Selwyn, 2018](#); [Mertala, 2019](#); [Teräs et al., 2022](#); [Suoranta et al., 2022](#)). By contrast, critiques of techno-solutionism in the contexts of “open, distance, and digital education” (ODDE) ([Zawacki-Richter and Jung, 2022](#)) and OUs in developing Asia are almost entirely absent from the discursive horizon. This near absence is evident, for instance, in the multitude of papers and keynotes on Asian ODDE that are annually presented at conferences and published in journals. To date, apart from the present study, Xiao’s articles ([2023](#), [2024](#)) are arguably the only ones that have substantially addressed this subject in the ODDE and OU contexts. This is not to imply that other scholars in Asia working in similar contexts have not, in opposition to techno-solutionism, cautioned against adopting technology for its own sake (see, for, e.g. [Bandalaria, 2007](#)), or pointed out that more ICT does not necessarily narrow the digital divide ([Jung, 2007](#)). The point is, rather, that the paucity of dedicated critiques of techno-solutionism in the contexts of ODDE and OU in developing Asia in the time of global digital convergence makes such critiques all the more vital.

Although OUs in general have had their first-mover advantage eroded by the ongoing digital convergence and are compelled to deliver a new value proposition, OUs in developing Asia are comparatively more precariously positioned on account of their more constrained resources and could thus ill afford to miscalculate in their attempt to deliver the substantive new proposition that is to be the roadmap to their reinvention. Sustained critiques of techno-solutionism applied or applicable to the Asian ODDE context have vital roles to play, especially for OUs in developing Asia. They serve as precautions for all stakeholders, including institutional leaders and regular faculty members, against succumbing to the seduction of technology amidst a technology race that seems to demand more technology rather than less. They serve also as cautionary reminders against overlooking or devaluing non-technological solutions to shortcomings in the provision of ODDE, as “unsexy” as they may be compared to buzzy technologies like AI-powered mentors and immersive virtual reality.

Hemmed in on one side by compelling arguments against techno-solutionism and, on the other, by the equally compelling narrative urging educational providers to keep up with the latest digital technologies lest they be left behind, how might OU stakeholders manoeuvre? To answer this, MEBS was employed in this study to obtain perspectival data from a select group of informants consisting of OU teachers. The following discussion unpacks MEBS and its deployment, and explains how the parsed data help to shed light on OU futures and the place of frontier technologies within them.

2. Method: MEBS

2.1 Introducing MEBS

MEBS is a method of data collection, analysis, and interpretation that is largely aligned with the constructivist epistemology and the qualitative design of narrative research originating

historically from the humanities, anthropology, and sociology (Creswell and Creswell, 2023). Data derived from the application of MEBS come in the form of stories that emerge when the informants apply empathy and imagination to individually respond in writing to the fictional situation and/or character presented to them in the frame stories serving as prompts. Conceptually, the empathy-based stories derived from MEBS capture the informants' "perceptions, expectations, mental images, and values regarding a specific phenomenon" (Wallin *et al.*, 2019, p. 3). What they textualize is truth which is not static and external to the observer in the positivist sense but as shaped through interpretations, beliefs, and social interactions in the constructivist sense.

Any study of speculative futures would require its informants to exercise their imagination and articulate tacit knowledge, and MEBS facilitates this more readily than other qualitative methods such as personal interviews as it does not require face-to-face interactions or seek to unearth the informants' life histories, and is thus much less likely to inhibit them or skew their responses. Also, MEBS stories are comparatively shorter, more compact and straight-forward, and less descriptive and personal compared with narratives produced in interviews, making them ideal mediums for constructing speculative futures that are shorn of extraneous details. More broadly, two additional benefits of employing MEBS in this study may be highlighted. First, the use of MEBS is a step towards redressing the pronounced over-representation of the quantitative approach taken in empirical research and the under-representation of the narrative research design in the field of open and distance learning (Peng and Xiao, 2022). And, second, it introduces a novel method derived from the humanities and social sciences to the positivist-dominant field of ODDE research; in doing so, it opens up new vistas for thinking and writing about ODDE.

Lastly, it is worth noting that, like other methods, MEBS does not claim to provide exhaustive insights or the last word on the research focus that it is put to work. It draws on empathetic narratives that are subjective in nature, which is its weakness (to positivist scholars with a preference for "hard" data) and strength (to post-positivist scholars who recognise the limitations of empiricism). It is deployed for speculative purposes, which is also its weakness (insofar as it is hypothetical and thus ungrounded in verifiable data) and strength (insofar as it provides for a better understanding of the present in which actions informed by wider beliefs about the future will manifest what is anticipated). In the final balance of things, what MEBS provides in the context of this study is a productive way of initiating critical conversations on a subject that OUs in developing Asia ought to be having, one that future studies may build on, for instance, by triangulating the MEBS stories presented herein with related data obtained from similar and alternative methods.

2.2 Informant selection

Unlike data from other narrative methods, MEBS stories are commonly obtained without identifying informant details tagged to them, although it is possible to take a non-anonymous approach if the researchers so choose. Adopting the latter approach, this study deliberately narrowed down its informant selection to fulltime and sessional OU teachers. This was done out of interest in what they had to say on the subject, especially given how, across contexts, teachers in higher education are rarely invited to give their input on matters related to digitalization that, ironically, directly impact them. The selection of OU teachers as informants in this study was thus a measure of countering their being commonly "perceived as objects of digitalization" instead of "active subjects playing a critical role in the shaping of digital futures" of higher education (Teräs *et al.*, 2022). In all, more than 30 potential informants were identified and invited by email to respond to the MEBS frame stories. Responses from the optimum range of 15-20 respondents for each of the two frame stories were required for the purposes of analysis.

2.3 Procedure

Guided by the three research questions, two frame stories were formulated to revolve around future scenarios relating to learning with/without advanced digital technologies. The frame stories were kept relatively short to avoid distracting or giving contradictory clues to the informants. Once finalised, they were emailed to potential informants with information about the research and instructions to follow if they gave their informed consent to participate. One frame story was sent to the first group of informants, while the other was sent to the second. Neither group was made aware of the existence of the other group and was thus unaware of the other frame story. The invitations requested that those who chose to participate read the frame story they received and respond to it individually in no more than 20 minutes by composing a short speculative narrative in any trajectory they saw fit. The instructions also made clear that the informants could render their MEBS stories in as few or many lines or paragraphs as they chose before emailing them to the researchers.

The frame stories presented to the two groups as writing prompts describe future scenarios relating to learning with/without advanced digital technologies. Set in the year 2033, the two frame stories are essentially the same but with one key element altered. As the two frame stories presented below show, the key difference between them is that the first centres on a university student who obtained straight A's because she has full access to the advanced digital technologies used by her university to facilitate teaching and learning, while the second revolves around a student who similarly obtained straight A's except that she has limited to no access to the advanced digital technologies used by other universities to promote teaching and learning. The university type that the students attend is unspecified on the implicit assumption that the convergence of universities has developed to the extent that distinction by type, being no longer as pronounced, has become subordinated to distinction by the level of technological advancement. Based on the frame story they received, the informants were asked to speculate on how the fictional student in the frame story they received managed to do well with either full access or little to no access to said technologies. The frame stories are reproduced below in full:

Frame Story 1 (High Tech)

The year is 2033 and digital technologies have become highly advanced.

In this future world, Afifah is a final-year university student who is about to complete her undergraduate degree. Afifah has obtained straight A's in almost all her courses. She succeeded because she had full access to the advanced digital technologies used by her university to facilitate teaching and learning.

Write a description of the specific ways in which Afifah succeeded in her studies as a result of the advanced digital technologies used by her university to facilitate teaching and learning. What advanced technologies did she use and benefit from? How have the advanced digital technologies helped her to learn differently from other students who did not have access to the same technologies?

Frame Story 2 (Low to No Tech)

The year is 2033 and digital technologies have become highly advanced.

In this future world, Aminah is a final-year university student who is about to complete her undergraduate degree. Aminah has obtained straight A's in almost all her courses. She succeeded even though she had limited to no access to the advanced digital technologies used by other universities to promote teaching and learning.

Write a description of the specific ways in which Aminah succeeded in her studies even though she had limited to no access to the advanced digital technologies used by other universities to promote

teaching and learning. What resources did she have to rely on? How did she learn differently from other students who had full access to the advanced technologies?

In total, more than 30 invitations were sent out to each of the two groups consisting of fulltime and sessional OU teachers. Solicitation for responses ceased when the target of 15 empathy-based stories per frame story was achieved. The number of responses collected was within the optimum range of 15–20 per frame story. Beyond the optimum range in MEBS, “the stories started to resemble each other” (Wallin *et al.*, 2019). Responses to each of the frame stories were subsequently combined into a single file and numbered sequentially for analysis.

2.4 Data analysis

This study employed textual analysis, a staple in literary studies, as a sense-making practice applied to the MEBS stories to identify, delineate, and interpret meaningful patterns that lend themselves to answering the three research questions posed at the outset (Särkelä and Suoranta, 2020; Lockyer, 2012). Various techniques were utilized, including examining the comparative word lengths of the responses to the frame stories and determining their potential significance, identifying and representing the key terms in word clouds for examination, and highlighting inclinations and divergent shifts in ideas and sentiments for scrutiny. Instead of being presented in isolation, findings from the deployment of such techniques are refracted through the lens of critical discourses on technology and higher education.

3. Findings and discussion: learning success and causality beyond technological determinism

3.1 Surface patterns

A total of 15 empathy-based stories were collected from OU teachers for each of the two frame stories. The shortest response to Frame Story 1 (High Tech) contains 48 words while the longest has 655 words; the latter is also the only one written in the Malay language, while the rest tallying 29 were produced in English. In contrast, the shortest response to Frame Story 2 (Low to No Tech) has 39 words while the longest consists of 353 words. On average, the number of words for the stories that responded to Frame Story 1 is 255, which is 101 words longer than the average of 154 for the responses to Frame Story 2. A plausible explanation for the disproportionate average word lengths is that the high-tech future of digital learning is relatively easier to imagine and narrate as compared to the low-tech future of digital learning. This may well be due to an abundance of materials that the respondents would have absorbed from the contemporary media landscape that is saturated with trending techno-optimistic imageries of the future, especially since OpenAI ignited the popular imagination with its release of ChatGPT in late 2022.

3.2 Findings and discussion in relation to the first research question

Regarding the types of future technologies envisioned as the key enablers of learning success and the ideological implications of the speculation, it is unsurprising that 11 out of the 15 MEBS stories that responded to Frame Story 1 explicitly invoke AI. AI is in fact the most frequently used term among the key terms employed in the responses to Frame Story 1 tagged in this study under “Technologies and Other Enablers of Learning Success” and visually represented as a word cloud in Figure 1 below. As in all word clouds, the more frequently a term is used, the more prominently it is visually represented.

In the composite future derived from these speculative stories, AI is projected as that which powers wide-ranging smart tools and futuristic versions of personalised learning,

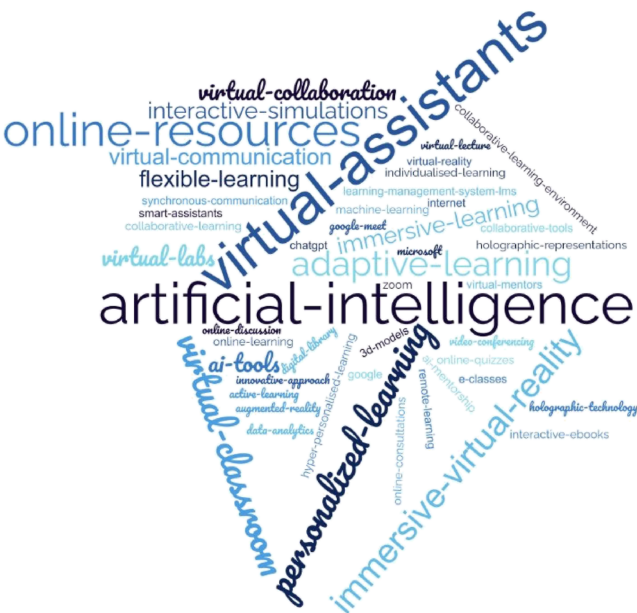


Figure 1.
Word cloud capturing
the key terms used in
the MEBS responses to
frame story 1 (high
tech) tagged under
“technologies and
other enablers of
learning success”

Source(s): Figure by authors

immersive learning, active learning, adaptive learning, collaborative learning, remote learning, and the like. These digital tools and digitally mediated practices are posited as the main factors that enabled Afifah, the fictional student in Frame Story 1, to attain learning success and to learn differently from students with little to no access to the same privileges. In the digitally transformed future, “AI assistants” – also variously referred to as “AI research assistants”, “AI mentors”, “virtual assistants”, and other similar terms by the informants – offer Afifah individualised help and support around the clock. Adaptive and sophisticated, they “hyper-personalise” her learning paths, track her progress in real time, and provide interactive feedback on her learning activities. Using complex algorithms, they “continually challenge her on just the right level, thereby ensuring optimal learning efficiency and retention.” They assist with her projects by conducting online searches on her behalf, and even summarizing and combining information from multiple sources to fit her requirements, all in a matter of seconds. With an assemblage of intelligent technologies, Afifah is able to access a wealth of resources on demand, communicate virtually and easily in real time with her human and AI professors, collaborate synchronously with her global peers using holographic technology, and gain a deeply immersive understanding of her lessons more easily and effectively than students who rely solely on traditional textbooks and lectures. Saved from having to attend to tasks now automated by AI, Afifah has more time to focus on “hands-on action and taking action to achieve results”, to cite an informant, for whom action includes Afifah revisiting lecture recordings and reviewing concepts as needed.

While the majority of the responses to Frame Story 1 adhere to the frame proposition and extrapolate the future accordingly, two responses notably buck the trend to challenge it. The first concedes that digital technologies might save students considerable time and effort, for instance, by taking over the job of searching for information more quickly and efficiently, but insists in unequivocal terms that “Advanced digital technologies are not a significant factor

behind Afifah's educational success. Students are capable of excelling in their studies even in the absence of advanced technologies." Just as emphatically, the second response asserts against the grain that "The level of success of any individual in the digital age is not dependent on digital technology itself. It is always one's effort in optimising one's own time, focus, determination, and enthusiasm that will determine the success or failure of one's studies." This, it qualifies, does not detract from the argument that those lacking digital skills may find themselves disadvantaged in the future of work.

Another distinctive pattern observable from the MEBS stories that envision the pervasion of cutting-edge digital technologies in the imminent future of higher education is that they are remarkably congruent with the dominant consumerist projections that are available in the public domain. An example of the latter is found, for instance, in *Learning and Teaching Reimagined* (2020), the influential report jointly produced by Jisc (self-described on its website as "the UK digital, data and technology agency") and its high-powered partners in the higher education sector to guide university leaders (Clark, 2023). In a section of the report (p. 33), Lola, a fictional student in the year 2030, who is much like Afifah, is featured narrating how her studies flexibly fit around her life and how they are conveniently assisted by an "AI coach" tracking and alerting her about her progress. The congruence between the two futures suggests that belief in the salvific capabilities of digital technologies "moves across a wide range of social positions, from experts in the field, to its critics, and to a wider public that is beginning to be exposed" to them (Campolo and Crawford, 2020, p. 3). Undoubtedly, it circulates, also, in ODDE and OU circles even if few stakeholders within them would care to admit to holding anything close to the solutionist belief that digital technologies like AI may be the fix that OUs need to make up for the loss of their first-mover advantage.

Also discernible from the MEBS responses to Frame Story 1 is a certain "innocence" intimated by the absence of critical ideological awareness that may be symptomatic of the situation on the ground in and out of some OU circles. This lack of critical awareness pertains to the ideological workings of the discourse that pushes for the adoption of more technology as a neutral good and, at the same time, obscures the power relations and vested interests behind the push, not to mention the significant finding that "There is little robust evidence on digital technology's added value in education" (UNESCO, 2023, p. xvi; see also, Facer and Selwyn, 2021; Higgins *et al.*, 2012). Not insignificantly, the global EdTech market is projected to reach USD433.17 billion by 2030 ("EdTech", 2023) and AI technologies are, against the utopian stories typically told about them, "built to see and intervene in the world in ways that primarily benefit the states, institutions, and corporations that they serve" for they are "expressions of power that emerge from wider economic and political forces, created to increase profits and centralize control for those who wield them" (Crawford, 2021, p. 211).

As well, parsing the MEBS stories, a stark disparity was found between their framing of tech-mediated personalised learning as a naturally desirable and necessarily productive practice on the one hand, and, on the other, the position articulated in the recent UNESCO report (2023, p. 21) that the personalization of learning "clashes with the need to maintain the social dimension of education" and that those "urging increased individualization may be missing the point of what education is about." This raises the question of whether personalised learning and other popular trends implicitly taken as best practices in OUs should not be critically re-examined as OUs seek to reinvent themselves in the face of the digital convergence of universities.

3.3 Findings and discussion in relation to the second research question

On the question of whether learning success is thinkable ten years from now for learners with access only to "low to no tech" resources and whether these learners might have or develop a plausible advantage over their privileged peers with access to frontier learning technologies,

On the premise that learning in “low to no tech” mode in 2033 is not only imaginable (by OU teachers, no less) but also productive, the 15 responses to Frame Story 2 collectively propose an array of mostly basic digital and analogue technologies and interpersonal enablers of learning success that Aminah likely benefitted from. As visualised in the word cloud in [Figure 2](#) below, the most prominent key terms used for these enablers are physical library and physical resources, the latter being synonymous with “traditional” resources such as printed textbooks, photocopied learning materials, handwritten notes, and audio recordings of lectures. Other prominent terms used include caring human teachers, peer support, helpful friends, face-to-face interactions, and Sci-Hub.

From the responses to Frame Story 2, it emerges that Aminah actively relies on a combination of spaces, objects, and relationships to help her achieve her learning goals. For Aminah, the physical library and the community centre that she visits frequently are more than buildings that house basic but adequate learning objects (e.g. printed textbooks) and services (e.g. free computer use and basic internet). They are also, just as importantly, social spaces of practice in which she partakes in the acquisition of knowledge, intellectual exploration, and cultural interaction with staff and other patrons. Unlike some students in high-tech universities who “tend to spend too much time ‘communicating’ with technology at the cost of losing interest in the physical world and living human beings”, as suggested in one response, Aminah thrives on the human relations she cultivates. In person, she learns and draws support from her family, friends, teachers, elders, and other significant people. Her



Source(s): Figure by authors

embodied ties with them and their care for her well-being buffer her from life's turbulence and enable her to create a conducive environment to pursue her studies successfully. She invests time to make friends to study with and to occasionally carry out peer teaching, which she finds helpful. She taps on whatever resources that are available to her, including traditional forms of mass media such as radio, television, and newspapers. As an informant narrates, "not everything has to be high tech, Aminah says to herself; after all, the simple pencil is still the note-taking solution for astronauts in space." Having no AI to monitor her learning progress for her, Aminah monitors it herself, conscientiously. Without technological distractions, she manages her own learning and uses her instinct and critical judgment to solve problems related to her studies. In this way, her learning technique is her own "because she is her own designer and decision maker" who knows how to sort out what is important from what is not.

Parsing the speculative responses to the two future-oriented frame stories, what is most revealing is not so much the informants' construction of learning success as a destination with more than one path leading to it but more their asymmetrical attribution of the two fictional characters' learning success. Following the frame proposition, the majority of the responses to Frame Story 1 attribute Afifah's success to the "advanced digital technologies used by her university to facilitate teaching and learning." In a symmetrical attribution, the responses to Frame Story 2 would have identified only the basic technologies and other enablers such peer support as the key factors behind Aminah's learning success. Instead, asymmetrically, without denying the indispensability of these enablers, the responses additionally ascribe her success to a range of personal traits and skills that are not only almost entirely absent from the empathy-based responses to Frame Story 1 but also virtually obscured in contemporary popular discourse that projects frontier technologies like AI as the "secret sauce" of learning success in the impending future. The most prominent keywords representing these traits and skills in the responses to Frame Story 2 are resourcefulness, self-initiative, determination, problem-solving skills, and critical thinking. Figure 3 below shows a word cloud representation of the key terms tagged under "Personal Traits and Skills Driving Learning Success".

Noteworthy, in the speculative responses, the personal traits and skills identified as the driving force behind Aminah's learning success are only activated or manifested in the face of a lack that serves as a condition of possibility for their expression. More to the point, it is the lack of access to the latest digital technologies that are beyond Aminah's financial means of accessing that compels her to draw on her inner reserves to help her locate and secure the resources that are within her means of acquiring in order to leverage them to achieve her learning goals. Ironically, this lack that turns out to be a virtue that drives Aminah is also likely to be regarded by techno-solutionists as a problem ripe for techno-fixing – the fixing of which would foreclose the calling forth of these traits and skills described by one informant as the "timeless pillars of academic achievement". We see the foreclosure clearly evidenced in the case of tech-rich Afifah, who is hardly described in the responses as activating or manifesting the same kind of personal traits and skills that propel Aminah's learning success. If a word cloud were to be created for Afifah under "Personal Traits and Skills Driving Learning Success" for Frame 1, it would have only four terms, namely self-initiative, ability to extract and use knowledge, action-oriented, and self-management. And if the two "rebel" responses to Frame Story 2 had not invoked these four terms in their argument against the frame proposition that technology drives learning success, an entirely blank word cloud would have had to be created for this category.

The fact that the respondents to Frame 1 make almost no mention of personal traits and skills where Afifah is concerned is directly attributable to the fact that no real lack exists for Afifah to compensate for or struggle against, making her tech-rich learning experience



Figure 3. Word cloud capturing the key terms used in the MEBS responses to frame story 2 (low to no tech) tagged under “personal traits and skills driving learning success”

Source(s): Figure by authors

largely predictable, smooth, and cushy in a way that Aminah's is not. Virtually all of Afifah's learning needs have been anticipated and taken care of by cutting-edge technologies like AI-assistants. With the wealth of resources tailor-provided for her by AI technologies, for instance, there is little need for her to demonstrate resourcefulness; nor is there reason to demonstrate adaptability or self-determination when the same technologies have algorithmically adapted and determined for her the speed, sequence, and trajectory of her learning in the name of efficiency. In short, not only is learning success thinkable for students with access only to "low to no tech" resources, but these students may even have an advantage over their privileged peers in the aforementioned ways.

3.4 Findings and discussion in relation to the third research question

If the seduction of techno-solutionism in education is making it difficult or complicated for OU stakeholders to sociotechnically calibrate the place of technology in the future of ODDE and the OU, or to think productively of non-technological ideas to address issues and problems arising from the OU provision of ODDE, then an exercise such as the present MEBS study may prove useful in breaking the impasse. For a start, OU stakeholders, including the researchers behind this study, have reasons to be heartened that none of the OU teachers who responded to the second frame story saw students' lack of privileged access to frontier technologies as a barrier to learning success, and none imagined the loss of relevance, decline, or closure of universities, open or otherwise, that were unable to match their well-endowed counterparts in the provision of cutting-edge digital technologies and cultures. The fact that the respondents chose to be optimistic in this way gives credence and hope to the "low to no tech" future that will likely, realistically speaking, remain the global norm rather than the exception given to the persistent socioeconomic inequalities that education has perennially struggled to address (UNESCO, 2023).

OU stakeholders may also find it instructive to zero in on the fact that the informants invoked an asymmetrical range of personal traits and skills as among the key drivers of learning success. Their highlighting of these non-technological variables is especially significant because it rightly shifts the focus away from technology to an entire world of complex causal relations that has largely been occluded by the popular narrative that technology or the lack of it is the overarching determiner of the success or failure of any teaching-learning endeavour. Taking full cognisance of causality beyond technological determinism, resource-constrained OUs in search of a new mandate would do well to desist from promoting, in branding or material practice, the kind of technologically “amped-up” (Greenwood and Hougham, 2015, p. 98) culture of learning and teaching that pedestalizes the “more, faster, better” (Shaw *et al.*, 2013, p. 320) approach to education. Instead of resorting to “AI washing” or seeking to out-digitalize competing universities with constrained resources, OUs might find it more judicious to be guided instead by “sustainable openness” Xiao (2023, p. 247), which prioritizes affordability, access, and quality of education over technology in and of itself.

OUs would also find it worthwhile to open themselves up to thinking imaginatively of non-technological solutions to educational problems that techno-solutionism may well worsen. They may find inspiration from such ideational points of departure as “slow pedagogy” (Payne and Wattchow, 2009; Berg and Seeber, 2013; Shaw *et al.*, 2013; Supple and Cronin, 2023), an educational approach underpinned by the belief that students learn better when they learn at an unhurried pace. Taking cues from the broader “slow movement” (Honoré, 2005) that advocates a slower, more deliberate pace of life in response to hectic modernity, slow pedagogy abjures the culture of cramming, testing, and standardising in favour of paced mindful learning. Any technology it mobilises is always put in the service of immersion, introspection, inquiry, and dialogue – these being modes of learning that seek also to ground students in their embodied selves as they learn, as opposed to technology being used for its own sake with the inadvertent effect of reducing learners to abstracted minds whose knowledge is exteriorized in the digital world (Payne, 2003).

Instead of pursuing an all-digital transformation as a response to the convergence of universities, OUs may also find it more productive to introduce and integrate resourcefulness training into their curriculum and institutional branding. Resourcefulness training might not be as buzzy as AI and other hyped technologies but it is undoubtedly an assured way of helping students attain higher levels of academic success while at university by learning and putting into practice the requisite knowledge and skills to delay gratification, control own impulses, persist in the face of difficulty, cognitively reframe negative events, independently seek help, solve problems effectively with available personal and social resources, and so on (Kennett *et al.*, 2013; Zauszniewski, 2016). Resourcefulness training has the added bonus of continuing to yield results long after it has been offered, for the knowledge and skills it imparts will remain useful in any age, including the digital. It is also arguably a more substantive way for OUs in search of a new mandate to set themselves apart from competing universities, many of which will, ironically, likely converge into an undifferentiated homogeneous mass as they pursue the path of maximum digitalization.

4. Conclusion: humanism over technological solutionism

At a time when universities across types are globally converging on a digital future to deliver ODDE, OUs in developing Asia, too, have been pressured to technologically amp up their provision of the same, constrained resources notwithstanding, in hope that the move will address the competition and the existential crisis they face, and assure them of a place in the future landscape of higher education. As the foregoing discussion has shown, there are real risks in failing to resist discourses that tout the salvific potential of frontier technology in education. Occlusion of the complex causal relations of learning success and failure is only

one risk; potential mis-reinvention of the OUs' unique value proposition is another. Supported by the perspectives obtained with MEBS, the present study has further shown that the issues and challenges related to learning success and failure that OUs implicitly or explicitly approach with technology in mind are often non-technological in nature and require no technological fixes. It reiterates that digital technologies and cultures, while they may enhance learning, are not the universal panacea that they are often taken to be. Additionally, it argues that sustainability for OUs is not likely to be found in thinking that leans towards techno-solutionism but rather in sustainable openness and a humanist conception of the learners they serve as autonomous human beings, individuals whose complexity and unpredictability are irreducible to the digital data that many universities seek to harvest and use to construct deficit understandings of their identity and learning. Lastly, to conclude, this study is hopeful that other scholars, especially from OUs in developing Asia, will be persuaded to extend the critical conversation it has initiated, be it with MEBS or other research methods, to redress the paucity of critiques of techno-solutionism at a time when they are needed the most.

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Corresponding author

David C.L. Lim can be contacted at: david@oum.edu.my

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