

A Comprehensive Review: An Innovative Pedagogy for Future Education

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ABSTRACT

Pedagogical practices with high quality could affect students positively. In recent years, pedagogy in education is learner-centric or teacher-centric. Accordingly, different pedagogical approaches have been used by various traditional studies with an aim of creating an effective education system. Hence, this study intends to comprehensively examine various recent pedagogical practices to find its impact on students. It also attempts to discuss pedagogical statistics in global viewpoint and assess distinct approaches for teaching and learning. The study has also reviewed the Malaysian perspective regarding the pedagogical practices. Finally, it discusses the innovations to be employed in future for an effective education. Various teaching and learning styles are explored which could be opted by educators that suits them, and also employ the learning methods to students based on their ability. Innovations to be made in future pedagogy is also described that could serve as a guideline for researchers to focus for further implementation.

KEYWORDS

Education and Technology, Learner Centric, Pedagogy, Teacher Centric

1. INTRODUCTION

Pedagogy is the method of teaching with its associated educational values, justifications, evidence and theories (Subramani & Iyappan, 2018). It is an approach to be known and skills to be expertise for creating and justifying several decision types related to teaching. Pedagogy is widely employed in educational domains, although the nature and extent of its usage differs for each country (Black & Wiliam, 2018). Applying efficient pedagogical strategies assist students to accomplish better learning and understand their overall education ability. Several studies attempted to use various pedagogical approaches in varied cases. Accordingly, writing autonomous stimulus (undertaking writing activities through choice and pleasure) has been expected to improve writing skills. On the other hand, controlled motivation (undertaking writing for external possibilities) has been probable to impede them. Thus, it is significant that educators employ pedagogical practices in a way that assists the autonomous motivation of students to write rather than fostering controlled motivation. Besides, there exists few experimentally tested PD (professional development) programs for teachers concentrating on the pedagogical methods that are valuable to the autonomous motivation of students to write. A theoretical framework has been presented in writing named CASIS (collaboration autonomy support structure involvement and significant activities). It also possesses empirical indication of its efficiency for students, in-service and pre-service teachers. The analysis revealed that this program promoted high

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usage of pedagogical methods, but, this did not impact the translation directly to the motivational resources of students. But, few significant variations have been found between the control groups and CASIS students on controlled and identified regulations as an operation of school's socio-economic framework where students and teachers have been sampled (Guay, Gilbert, Falardeau, Bradet, & Boulet, 2020).

Efforts have also been made to meet the global requirements of education in recent years. Educators have been dissipating conventional framework of content verification and memorisation pursuing for training reflexive and critical professionals and the ability to solve issues. In the educator's perspective, capability of permitting students to actively involve in learning and competency skills have been expected (Santos, Figueiredo, & Vieira, 2019). Hence, strategic guidelines have been determined to develop conceptual transformations in HE (Higher Education) students especially in student centered methods for teaching. Analysis has been undertaken through PICO (Population Intervention Comparison and Outcome) technique. Four thematic divisions have been identified such as difference between approaches and concepts to teaching, digital simulation, strategies applied in huge classed and mixed methods with associating ICTs. Using new pedagogical methods advance the engagement of students, enhance creative and critical thinking, minimise apathy and subsidise to peer learning. Thus, PD chances and the colleague's assistance have been vital for consolidating sustainable alterations about the HE teachers. Over the past few years, BME (Business Management Education) has perceived tremendous growth worldwide. Therefore, analysis has been carried out to find the perceptions of postgraduate business learners towards andragogy and pedagogy. Dataset comprising of responses from three hundred and thirteen business students from India has been used. Data collection has been gathered from participants in diverse management programmes of various HL (Higher Learning) institutes in India. Outcomes revealed that students prefer andragogy that could be satisfied only through the business educational providers transferring to learner centric teaching as well as curricula. Preferences of students for andragogy replicate the changing requirements of employers in India. Findings have considered inferences for developing student oriented teaching techniques and curricula in HE sector in India (Muduli, Kaura, & Quazi, 2018). Presently, various pedagogical strategies have been employed which is typically broken into four main categories such as behaviourism, social constructivism, liberationist and constructivism. Efficient pedagogies include diverse range of methods such as structure and whole class group activity, individual activity and guided learning. Hence, the present study attempts to explore varied kinds of innovative pedagogy for future education by comprehensive analysis of different researches.

The major contributions of this study are listed.

- To analyse recent pedagogical practices as well as its impact in recent education to explore the engagement of students, improving creative and critical thinking, apathy minimisation and subsidise to peer learning.
- To enumerate significant pedagogical statistics as a career in global viewpoint.
- To evaluate the learning and teaching approaches in addition to recommendations in pedagogy.
- To discuss the innovations to be focused in future education pedagogy.

1.1 Paper Organisation

Section I discusses the fundamental ideas of innovative pedagogy, different pedagogical approaches employed by various traditional systems, impact of these employment and the aim of the present research. Subsequently, Section II examines the recent pedagogical practices and the engagement of students for these approaches. It also explores the pedagogical statistics in global viewpoint. Followed by this, models and parameters of various education pedagogy, pedagogy status in recent education, analysis of learning and teaching strategies as well as the recommendations in pedagogy are explained in Section III. Then, innovative pedagogy for present and future education is provided in Section IV. The final thoughts of this analysis are summarised in Section V.

2. PEDAGOGY

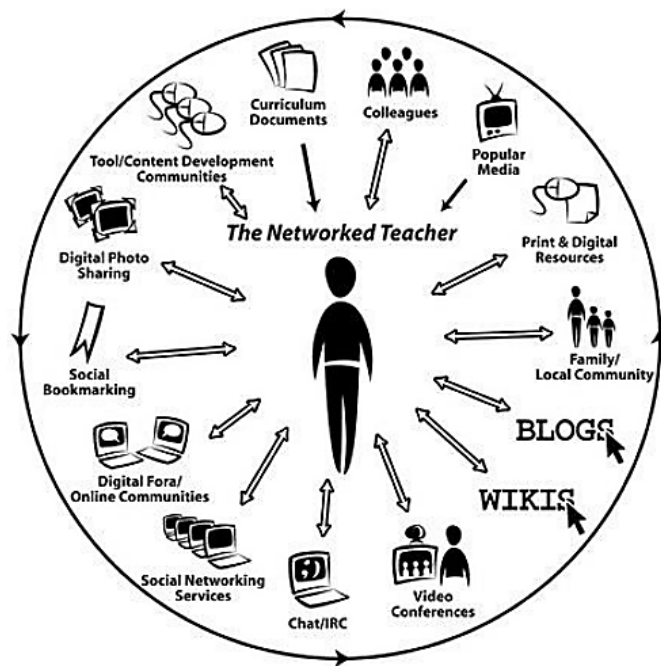
Pedagogy is defined as the association between culture and learning methods. It has been determined in accordance with the beliefs of educators regarding the way in which learning happens. It needs significant classroom interactivity between learners and educators. The main intention of the practice is to assist the students in developing better learning thereby to build positive attitudes and skills (Jumanovich & Eshboevna, 2019).

2.1 Recent Pedagogical Practices

Pedagogy affords new functional viewpoint for interpreting various earlier evolving triad communications between infants and adults regarding the new objects that were mutually attending. Correspondingly, a pedagogical method to PETE (Physical Education Teaching Excellence) have been explored to assist the PSTs (Pre-Service Teachers) in learning the ways to enable suitable experiences in PE (Physical Education). Pedagogical principles have been shared to subsidise new understanding that helps the PST's LAMPE (Learning about Meaningful PE). The introduced principles comprise of making prioritisation of important participation explicit, designing and debating learning by meaningful PE, assisting in the engagement of PST with significant features as teachers and also as learners, setting learning activities through meaningful participation features and assisting in replicating PE skills. A method named S-STEP (Self-Study of Teacher Education Practise) has been employed to find the pedagogical strategies that permitted PST's learning regarding PE (Ní Chróinín, Fletcher, & O'Sullivan, 2018). It has been concluded that the research subsidised to new comprehension of the ways to assist PST for learning so as to teach with the prominence on enabling useful PE experiences. Furthermore, teaching pedagogies have been identified such as brainstorming, sharing knowledge, collaborative case study, fieldtrip, group activities, role play, mnemonics, peer analysis of learning and teaching, data, technology and problem driven method that could suit within micro-teaching. This is termed as XMT (eXtended Micro-Teaching). A pilot-study has been conducted to find the enhancement that will be accomplished by employing XMT pedagogies in learning and teaching in IEC (Indian Engineering Colleges). From the outcomes, it could be found that all institutions might possess pure or blended online teaching. This might initiate to adopt the introduced teaching pedagogies and numerous pioneering methods will be executed to improvise education system particularly in India (Rajan & Sathiyarayanan, 2020). On the other hand, VR (Virtual Reality) has been the modern technology mainly utilised for building virtual environment associated with prevailing natural world. It is the substitute of conventional physical reality in various applications where energy, cost and other safety predictors have been the main parameters.

In recent technological viewpoint, VR technology has expanded in several education areas. VR based pedagogy assists in solving many traditional education issues through the learning community with respect to interaction, concentration towards academics and showing interest. It could be summarised that this strategy enhances understand ability, more immersion or attention in the discussion topic and incorporates skills needs for industrial domain in learners in digital world (Benson & Kiyasudeen, 2020). Deploying digital technology for assisting learning has developed exponentially in recent times as shown in figure.1. This has resulted in an enhanced critical analysis in various subject domains as well as from diverse disciplinary perspectives (Casey, Goodyear, & Armour, 2017). Initiating Pratham's Read India has become an extensive intervention for improving fundamental literacy and mathematics among children of primary school in India. This program commences almost ten years back and has advanced over-time, which subsidise knowledge on the methods under which efficient pedagogy could be conveyed to scale. It employed two approaches where the initial approach aimed to work straight with local schools and communities of village to improve the learning of children. Learning camps have also been organised in schools for six to ten consecutive days. Children have been grouped based on their learning level and local volunteers assisted to teach them. Second approach aimed to work in association with government and comprise of grouping students as well as teaching them in accordance with their proficiency level instead of grade. It also

Figure 1. Teaching through technology (Nancy, Parimala, & Livingston, 2020)



explored promising outcomes. Randomised control trials and independent assessments on both these approaches have represented significant influence on student's learning (Banerji & Chavan, 2016). Similarly, pedagogical approaches have been applied in different areas. Pedagogical innovations in nursing Ph.D. programs have been discussed along with its influence of changes on training nurse scientists. Summit attendees explored different pedagogical innovations. It included development of BSN and three-year Ph.D. programs to Ph.D. programs, Alterations in the opportunities of learning and programmes as well as the part of post-doctoral fellowships. Analysis has been undertaken to reveal various opportunities available through these innovations in addition to challenges encountered through it. Opportunities included creating scholars with the research vocations that have more potentiality than historically perceived in nursing domain and also development of distinct mentoring and education opportunities after and during doctoral studies. On the other hand, challenges included the influence of timeline of the condensed programs possessed on delivery and content of curricula, skillsets and expertise of Ph.D. program graduates in nursing. Further, National co-ordination assessment have to be undertaken on Ph.D. programs through shared metrics for assessing the impact of these innovations on developing nurse scientists etc. (Giordano et al., 2021).

2.2 Pedagogy Statistics as a Career in Global Perspective

From global viewpoint, teaching about nation, community and world varies in different manners from conventional methods to study of world geography, foreign policy, cultures, U.S history or world civilisation. In education, global viewpoints focus on universal culture, common things shared by humans, appreciation and knowledge of people's viewpoint and perspective consciousness as it performs on cultural variations. The fourth component in global education literature has been the recognition that individuals make choices influencing other people worldwide and vice-versa. These interdependencies and interconnections among students, other people and communities have made global educations to encompass goals for participation, long-term engagement and decision

making outside borders and also in local community. Educational teachers involved in executing global education on their programs explored their attempts as making teachers to create connections throughout world regions, civilisations, global issues and cultures rather than teaching them individually. They also aimed to find historical backgrounds for present world issues and events thereby discover the culture diffusion process overtime, associate global content with local community, teach appreciation and tolerance of cultural variations. Thus, pedagogical methods include learning through solving of real-life issues, learning through enquiry, critical thinking, virtual environments etc. To supplement the development of pedagogical implements subsiding towards digital oriented education including MOOCs (massive open online courses), various activities have been established for maintaining high knowledge level as well as knowhow for engineering and masters in micro electric field. Accordingly, various institutions in France make use of MOOC with no face-to-face courses for making students gain experience on micro electric technology in CNFM network centre (Bonnaud & Fesquet, 2016). Objectives of CNFM have been to maintain high level scientific skills for all graduate students for satisfying the company requirements and maintain the abilities of engineer to innovate. Analysis carried out on platform user populations explored the student's satisfaction. This development in pedagogical technique has been a uprising for teachers who possess minimum face to face lectures. In the Korean context, government has provided schools with the internet service from 2001. In addition, the ICT (Information and Communication Technology) related education attained minimum popularity among the teachers.

Combining teaching methods and innovative technologies like augmented reality, flipped learning, e-textbook and web-based mind-map has recently turned to be a new trend in education especially in Korea. Though the pedagogical standard has been transforming from conventional learning based on text to smart learning based on technology in Korea, the issue is that transformation has particularly come from basic school settings. Moreover, EFL (English as a Foreign Language) teacher programme has been scarcely prepared for their forthcoming students equipped with assured digital literacy as well as possess digital genes right from birth. Efficient curriculum progress for CALL (Computer Assisted Language Learning) combined with EFL training program assist student and teachers to make efficient, innovative usage of digital techniques in future language and own language. Local voice as well as perceptions of executing CALL into EFL context has afforded in accordance with global perspectives. Outcomes explored that using CALL could develop the confidence of students and teachers in becoming pedagogical expertise by improving technological skills (Jeong, 2017). Furthermore, CTS (Critical Thinking Skills) have also been a significant factor for developing students. Hence, it is vital to confirm efficient teaching where educators have to utilise different innovative pedagogical methods in workplaces and in classrooms. These methods include teacher's styles and actions of teaching that encourage students for learning the way to study, enable deeper thinking, motivate students for thinking critically to attain solutions for real-life issues, support teaching and curriculum, concentrate on the quality pedagogy and assess the learning results. Interview methods and qualitative online survey has been used to attain more information from twenty-six countries with fifty-five participants in Global South. It comprised of HE teachers who included CTS into teaching practices. Findings revealed that education to adopt CTS could assist students for understanding world, have confidence and gain ability to challenge the traditional believes and enhance the approaches of accomplishing things with innovation. Conversely, to accomplish this, HE teachers have to be trained effectively in using innovative teaching techniques (Avidov-Ungar & Forkosh-Baruch, 2018; Okolie et al., 2022). Comprehensive analysis has been enabled for evaluating pedagogical innovations employed by few Canadian university professors to counterpart the traditional domain in this area. Data gathered has permitted to compare, integrate, design and theorise resulting in finding the observed impact of participants towards innovative teaching methods on learning and teaching. Thus, pedagogical innovations will have worldwide advantages in education by assisting learning, graduation, and course access for students, behaviour change and professionalization. Besides, pedagogical innovation renovates teaching practices. It also fulfils the satisfied professors.

Furthermore, academic institution could take superiority in accomplishment. On contrary, outcomes explored the respect provided to the professors and pedagogical visionaries, however not to inventive teaching that remains depreciated (Walder, 2017).

2.2.1 Pedagogy in Malaysian Perspective

In Malaysian perspective, education is open to present environment and future alterations in demands. It also intends to develop harmonious and balanced humans with respect to emotional, physical, intellectual and spiritual by its co-curricular and curricular activities. The problem of geographic learning and teaching in school and HE institutions have been significant for some period. With the progress of Science and Technology, the geographic field persist to develop in accordance with the global needs of humans. But, this situation changed in Malaysia when geography attained to be an elective subject since 1993. After this transformation, geography has turned to be isolated in the education system impacting the HE institutions in Malaysia. However, several stages have been taken by the education practitioners of geography to gain the attention of the students through teaching and learning technique. Pedagogical and professional competencies of geography teachers have been analysed in Malaysia. Study encompassed two hundred geography teachers throughout this country. A questionnaire has also been utilised for data collection. Six pedagogical and professional competency variables have been studied including teacher's level of topic understanding, subject and content-oriented knowledge, pedagogical and technology oriented knowledge, professional values, pedagogical and content oriented knowledge and professional knowledge. The results explored that the professional values and knowledge of teachers require to be improved for accomplishing the ideal pedagogical and professional level of competence to create effective geography teachers (Hanifah, Mohmadisa, Yazid, Nasir, & Balkhis, 2019). Furthermore, Mishra and Koehler developed a TPACK (technological pedagogical content knowledge) concept in education (Wang, Schmidt-Crawford, & Jin, 2018). Various researchers accepted this model as having an influence on using this concept in pedagogy throughout the content paradigm. Thus, it has attained interest from various educators recently.

Research liberated by Southeast Asian Ministries of Education (SEAMEO) explored that Malaysia is a country that has been deficient in completely executing technological incorporation in education. Hence, science teachers of secondary school in Malaysia have been analysed at exhibiting their viewpoints regarding the ICT combination with TPACK. Qualitative and quantitative findings have been focussed. Two hundred and nineteen survey respondents have been included with three interview participants. Multiple regression and descriptive statistics have been used for analysing the data quantitatively. On the other hand, thematic method has been used for analysing the data qualitatively. Outcomes represent that understanding science teachers about their knowledge based on technology is minimum than context, pedagogical and non-technologic awareness. Moreover, interview outcomes explored about the integration of technology to TPACK such as kind of ICT utilised, teaching pedagogy, ICT integration purpose and content knowledge. Science teachers have to construct sufficient TPACK level for incorporating ICT into corresponding subject domain effectively (Chieng & Tan, 2021). Unemployment has also been a significant problem in Malaysia. Unemployment rate increased from 3.1% to 3.4% between 2015 and 2016 and this rate remained the same until 2018. Furthermore, the unemployment rate reduced to 3.2% till 2019. Hence, a TCPM (Technical Communication Pedagogical Model) has been developed by finding the relevant objective, learning content, delivery method and evaluation technique of this model. It also explored the impact of the significance of English language on associations of applicable curriculum elements of TCPM. Questionnaire has also been developed and assessed to validate the contents by specific experts from technical, vocational education and local industry. Two hundred and five English language educators in MVC (Malaysian Vocational Colleges) have been chosen through a stratified RSM (Random Sampling Method) and replied to survey. Responses have been analysed through PLS-SEM (Partial Least Square-Structural Equation Modelling). This model encompassed of having relative objectives,

learning content and delivery and evaluation technique for executing technical communication in MVC, constituents that have been less highlighted in present curriculum. Thus, graduate employability could be improved with MVC execution (Jamaludin, Alias, DeWitt, & Ibrahim, 2020).

3. PEDAGOGY IN RECENT EDUCATION

Pedagogy in recent education could be either student centered or teacher centered with high-tech or low-tech strategy. Student centered approach paves way for learners to actively participate in their learning process. Though the teacher delivers content, they take many mentoring or coaching role for helping students in learning process. Assessments have also been frequently provided to evaluate the trends and knowledge. On the other hand, teacher centered approach concentrates on educator to afford lectures thereby share content by direct instructions. This fixes the teacher knowledge and convey that particular knowledge to the students. Recently, technology played a vital part in education and hence teachers use this technology to assist the students in learning contents as shown in figure.1. The degree to which a teacher uses technology for helping students learn can be grouped into two categories as low tech and high-tech strategies. If less technology is used by the educator, it is called low tech strategy, while, if the technology is used to its maximum, then it is high tech strategy. Examples of low-tech strategy include worksheets, projects on hand etc. Whereas, high tech strategy involves technology like personal devices, applications, google suite etc.

Moreover, pedagogy focuses on various learning styles for students in recent education. Every educator knows that all the students vary in their way of learning. Finding the correct way to make students learn assists the educator to create lessons thereby helping each learners learn flexibly and easily. Hence, technology has been incorporated into teaching and learning techniques to provide students a better way for learning (Nancy et al., 2020). Typically, two educational models have been practiced worldwide that comprised of hybrid learning and face to face learning. Conventional techniques for learning and teaching is synchronous and usually involve classrooms where the students and professor interact within space and time. This teaching model is termed synchronous. Instances include interactions with distance learning and face to face for propagating information to learning community members. Technology has been blended with this kind of learning and is termed asynchronous teaching. Hybrid or asynchronous teaching possess various merits. It encourages the learning practise, faculty could also include many instructions overtime which improves the student's learning. It has been concluded that teaching undertaken with technology makes it interesting for students and involve them with various stimuli thereby creating an activity-based learning (Banerjee & Seshaiyer, 2019). Awareness has been growing to enhance the learning of students persistently. Hence, it is vital to realise the complexity associated with the education system in addition to various issues faced in this area. For instance, significant efforts have been made to upgrade the mathematics education. These initiated efforts represented the way in which further efforts have to be made for enhancing student learning and thinking through educator pedagogical practices by proposing specific guidelines. It included linking knowledge to real-time outside school, confirming that learning transfers from rote techniques, elevating curriculum so it goes far from textbooks, making exams highly flexible and adding them with classroom and developing an overriding uniqueness learned by caring issues within the country's democratic policy. Moreover, inputs from adult education and CP (Cognitive Psychology) result in revolution in pedagogy by reframing all the teaching practices in a way that would assist in student's learning (Rege Colet, 2017).

3.1 Models and Parameters of different education pedagogy

Various education pedagogical approaches considered different models and parameters in various domains and they are presented in table-1. These have been suggested with an aim of improving the academic and physical performance of students for their better future.

Table 1. Models and Parameters of different kinds of education pedagogy

S.no	Author	Type of pedagogy	Domain/ Applications	Location	Model	Parameters	Impact/ Outcome
1.	(Santoso, 2021)	Critical pedagogy	HE (Higher Education)	Indonesia	Phenomenological methodology	Social justice issues among teachers and students, power relationships among them	Though this model is challenging, teachers must make students aware of surroundings and direct ways to solve issues. Educators must also discuss their failures and success with their co-workers which could be meaningful by depicting critical pedagogy.
2.	(Okolie et al., 2022)	Quality pedagogy	HE	Global South	Online survey, interview and qualitative analysis	Teaching approaches, setting issues and active learning	Consistent responses have been attained through interview and online analysis. Suggestions have also been provided-HE institutions must encourage many skill based learning by providing real-world lessons.
3.	(Walter, 2017)	Pedagogical innovations-support schemes, teaching strategy, professionalisation, interculturality, online lessons, interdisciplinarity and pedagogical methods like skill based method etc.	HE	Canada	Grounded Theory Analysis	Teaching, professors and students	Balancing the parameters could make learning and teaching more efficient at the university.
4.	(Rajan & Sathiyarayanan, 2020)	Extended Microteaching pedagogies	HE	India	UTAUT (Unified Theory of Acceptance and Use of Technology)	Social factors, effort expectancy, facilitating conditions and performance expectancy in terms of attitude and behavioural intention	This approach creates learning precise, effective and brief for the students and the educator.
5.	(Hanifah et al., 2019)	Pedagogical methods of geography teachers	Competencies of geography teachers with respect to pedagogy	Malaysia	Quantitative analysis	Teacher's knowledge on subject topics, educator's understanding on subjects, knowledge on pedagogical technology	Professional values and knowledge should be enhanced by teachers as these explore moderate relationships.
6.	(Guay et al., 2020)	CASIS	Elementary students	NA	Two quasi empirical researches	Collaboration, Autonomy and support, Structure, Involvement and Significant activities	Few significant variations have been found between the control groups and CASIS students on controlled and identified regulations as an operation of school's socio-economic framework where students and teachers have been sampled.
7.	(Nancy et al., 2020)	Teaching pedagogy	Modern Education System	NA	Hybrid teaching model	Soft skills and technical skills of students, problem solving, critical thinking.	Encourages learning process of students. Faculty could add many instructions overtime.
8.	(Kearney, Burden, & Schuck, 2019)	Smart pedagogy	School students	NA	Evidence based principles-digital play, real-world processes and tools, seamless learning, student autonomy etc.	Adaptive to learning behaviours and habits, dynamic and interactive, highly social, responsive etc.	Smart pedagogy assist in going beyond constant innovation, However, it has been disruptive for implementation in reality as typically bureaucratic organisations resist to change.

3.2 Review of Recommended Teaching and Learning Strategies in Pedagogy

Various theories exist for providing ways for better learning. Accordingly, Howard Gardner developed Gardner's Theory of Multiple Intelligence in 1983 (Sener & Çokçaliskan, 2018). This theory stated eight ways for learning. The learning styles are listed and are also shown in figure.2.

- **Visual Spatial:** people good at maps, directions and puzzles.
- **Interpersonal:** this kind of student is intuitive and have good relationships
- **Logical Mathematical:** this kind of student is good in problem solving
- **Linguistic Verbal:** learners have good speaking and writing skills
- **Naturalistic:** this kind of learner like nature and its surroundings.
- **Musical:** this student has ability in music
- **Intrapersonal:** this student is self-evaluative and highly reflective
- **Bodily kinaesthetic:** this learner possess better hand and eye co-ordination

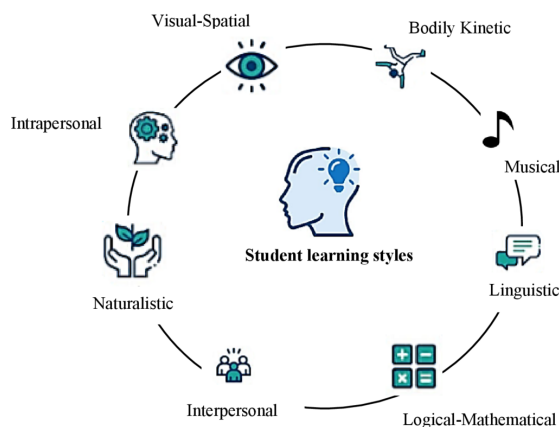
Hence, Garner's theory explored eight different learning styles to help determine the probable vocations, weakness and strengths for each kind of students.

Similarly, Neil Fleming proposed a theory of learning styles named VARK (Visual Aural Reading or writing and Kinaesthetic) (Emami, Bazzocchi, & Hakima, 2020). In this context, visual learners see the tasks completed by other people and then learn to attempt it themselves. They work effectively with diagrams and charts. Aural learners require to hear the specific information for processing it correctly and they enjoy reading aloud to oneself. Moreover, a writing or reading learner desires to read books and to take notes. This kind of learners like to write definitions and create notecards. Finally, a kinaesthetic learner like trying tasks for oneself and tend to move fiddle with objects in their hands.

On the other hand, five diverse pedagogical methods for teaching exists, these methods differ from one another. Each teacher can decide which particular method works for them and employ it accordingly. At times, combining these methods could also be utilised.

- **Constructivist:** learners show active participation in learning and create knowledge and meaning of study material. Learners don't passively memorise the material.
- **Inquiry based:** this strategy rely on problems where students are provided with real-world issues and also have chances for solving them. They research further and ask questions while

Figure 2. Learning styles for students



learning the materials and concepts that they might not even comprehend that they are learning.
Example: Project based learning

- **Collaborative:** Many learners perform combined study. Instructions from small group rely on concepts where various students subsidise and help one another in learning.
- **Reflective:** This method applies more for educator than students. In this context, educator reflects upon projects, assessments and lessons to perceive the way in which they could be enhanced in future.
- **Integrative:** it includes various academic disciplines. Common language has been employed in cross curriculum for making students understand the teacher's lecture. This is significant for writing and reading skills. Students could also write proficiently in non-English classes.

As technology has recently developed, pedagogy can be accomplished through various social media platforms by undertaking online courses, sharing documents, blogs, etc. (Freitas & Paredes, 2018). Hence, it is concluded that combining these pedagogical strategies benefits students as well as the teachers.

4. INNOVATIVE PEDAGOGY FOR FUTURE EDUCATION

Several traditional researches suggested different innovative pedagogy for better future education. Various innovations have to be provided to achieve effective education and the future works are presented in this section.

4.1 Innovation in Future Education Pedagogy

Pedagogy interpretation associated with LAMPE intended to concentrate on ways to understand how this approach works in diverse courses and taught by various group of educators (Ní Chróinín et al., 2018). Similarly, the article (Rajan & Sathiyarayanan, 2020) recommended to analyse the data comprehensively to afford clear viewpoint in the Indian education communities, withdrawal and success rate for online courses and face to face have to be compared. Tracking the correct degree of XMT development has been complex due to definition ambiguity integrated with the inability of institutions to track new practices. Hence, focus has to be given by analysing the issues in which XMT interacts with affective, behavioural and cognitive element of student's behaviour in addition to the analysis of transformation ability for academy. Furthermore, discussions of summit aimed to establish future study by assessing the present innovations executed in nursing Ph.D. programs. National co-ordinated assessment has to be conducted for evaluating Ph.D. program by shared metrics. Various career opportunities accessible to Ph.D. developed nurses must be taken into account as successful results and incorporated in the assessment plan (Giordano et al., 2021). In context of critical pedagogy, future study must assess the education stakeholder's viewpoint on executing this pedagogy in their respective institutions. In addition, teacher's perspectives must be assessed after they involve in discussions by involving an educator who is well known about critical pedagogy (Santoso, 2021). Furthermore, educational practices could be improved with respect to dynamic pedagogy that rely on internships and lab works. This will improve the acquisition of know-how that is a substitute to MOOCs and will also make students get better prepared for embracing innovative and creative ideas in future (Bonnaud & Fesquet, 2016). Thus, further focus has to be given on the ways in which pedagogical innovations might be positively included in teaching with respect to institutional viewpoint. Professors have to be motivated to utilise their creativity for continuous assessment of their pedagogical innovations, evaluate their learners with authentic assessment technique and also share their expertise in teaching with other teachers (Walder, 2017).

4.2 Innovative Pedagogies for Present Education.

Each pedagogical method affords a situational problem that depicts the tension arising during the teacher's design and execution of pedagogical practices for improving teaching and learning. Four

signature pedagogies have been utilised in different HE contexts that includes, PBL (problem based learning), CBL (case based learning), GBL (game based learning) and TEL (technology enhanced learning). Each of these methods are discussed along with the tensions that raised with deep, implicit and surface structures as shown in table-2.

Table 2. Various pedagogical approaches

S.no	Author	Approach		Outcomes
1.	(Malmia et al., 2019)	PBL (Problem Based Learning)	Surface Structure	Few educators would have returned to conventional moral pedagogical method due to insufficient PBL experience or practical limitations (for instance: class size, time restrictions). This is true when specific learning purposes like knowledge and operations of various kinds of assessment gets misinterpreted.
			Deep structure	Pre-service teachers have been expected to study the ways to be a critical thinker regarding the traditional performance evaluation quality. For instance: writing a test denotes a performance evaluation. However, it is not needed for students to connect it to real-world when it is not intended to do that way.
			Implicit structure	This structure enables the evaluation course to develop professional values, dispositions and attitudes of pre-service teachers.
2.	(Sousa & Rocha, 2019)	GBL (Game Based Learning)	Surface structure	To alleviate this tension, additional general game features have been adopted that created avatars for leader board, online activities etc. This transformation created new dilemma in addition to interesting interactions. Moreover, students also attempted to disconnect the attitudes they expressed through online from that discussed inside classroom so as to not explore their avatars. Concurrently, students involved with courses in different form as avatars. For instance: paying close attention to one another with respect to opinions and personalities to reveal their avatar etc.
			Deep structure	Assumption has been made that students learn through games and hence graduate students must get a chance to experience the ways in which gaming could help the learning process. For instance: though microblogging has been aimed to attain playful involvement with design idea, students expect detailed rules like word limit.
			Implicit structure	This structure aimed to develop the professional values and attitudes of graduate students, disposing learning principles of a game.
3.	(Talukdar, 2020)	CBL (Case Based Learning)	Surface structure	Utilising case studies for formal teaching and evaluation of reasoning skills to graduate students has been innovative and highpoints tension in pedagogy of school psychologists as CBL is employed in other areas.
			Deep structure	There exists tension between the ways to assist students in employing content knowledge regarding analysis and diagnosis in addition to the ways assisted in getting reasoning skills needed to theorise cases.
			Implicit structure	This found it hard to employ structured tool for data organisation, desire to utilise many free flowing method irrespective of the point that they have less probability to take into account all information through CBL.
4.	(Daniela, 2019)	TEL (Technology Enhanced Learning)	Surface structure	With no outcomes in learning associated with artifact design, this work focussed on contents that leads students in developing insufficient skills and knowledge in outlining visual presentations.
			Deep structure	To demonstrate students in understanding specific content oriented knowledge, understanding the media sound is needed which is being utilised and also principles have been designed through the chosen media.
			Implicit structure	Transformation has to be accomplished from surface level technology to high pedagogical practices which needs the learning and teaching value with technology. Issues associated with citing sources, cyber-bullying, copyright and plagiarism have to be taken in guided actions and authentic discussions that results in approaches to adopt digital citizenship. These conversations and learning experiences should make students have opportunities in developing comprehensive understanding of incorporating technology into learning and teaching and also ethical and moral factors that impact integrity and quality of digital work.

5. IMPLICATIONS

The present study has made an enormous effort to review about the existing literatures regarding the pedagogy practice in teaching style in a Malaysian perspective. From the review, it has been acknowledged that many educators are unaware of the pedagogy practice and its contributions to enhance the learning capability of the students. Pedagogy can enhance the overall teaching quality that makes the student more receptive during their class hours. This will in turn improve the participation level of the student and their level of contribution during the learning process. A well-structured pedagogy will obviously assist the impart education to the students by utilising the range of learning styles. It also enables the students to have a deep and appropriate understanding of the subject. Implementation and encouragement of Pedagogy in school environments will aid in improving the teaching practice that is moved to the developing century and also will equip the students to cope up with the upcoming demands of the education system.

6. LITERATURE GAPS AND FUTURE RECOMMENDATIONS

The main gaps identified through the evaluation of conventional works are discussed in this section with future suggestions for the decision makers. Evaluation of education stakeholders' perceptions for applying critical pedagogy in their organisations and assessing the perception of the teachers after they engage in group discussions by considering teachers who are clear idea of critical pedagogy should be considered as a future work (Santoso, 2021). The considered existing paper had interviewed small number of Higher Education teachers and the responses fetched from the teachers were inadequate. Opinion or perception of few respondents will not help in representing the situation of the entire country. Also, there is an additional limitation due to lack of proper information regarding the curriculum of Higher education for each of the considered countries that contains the activities and programs that aids in developing the CTS of the students (Okolie et al., 2022).

The study has been performed in a content-specific mechanism on a distinct localised population as only the professors from one university were interviewed. The study should have adopted the analytical generalisation that is restricted to the same place, time, social contexts and population. Hence, how pedagogical innovation could be integrated optimistically with teaching and should be considered as an asset. Incorporating innovation in teaching from an institutional perspective should also be considered (Walder, 2017). A deep and appropriate information is needed to provide a better idea regarding the Indian education and welfare communities. A proper comparison between the success and failure rates of face-to-face online course should be provided (Rajan & Sathiyarayanan, 2020). The considered model didn't make any attempt to measure the impacts of CASIS on different level of students that is, students with learning difficulties. Certain other results regarding the quality of writing as such results might have impact on students' motivation for writing which is lacking in the existing model. The future researchers of the traditional study should attempt to evaluate if CASIS have any other benefits for teachers regarding the motivation regarding their work (Guay et al., 2020).

7. CONCLUSION

The study aimed to perform comprehensive analysis of recent pedagogical approaches to assist in developing effective education by improving the student's learning. It enumerated pedagogical statistics in global perspective and assessed various approaches for teaching and learning. With the intention of reviewing the Malaysian perspective regarding the pedagogical practice, the present study has underlined that teachers handling various subjects are lacking behind in terms of knowledge and awareness of pedagogical teaching practice. They need to be trained to employ the innovative teaching techniques of Pedagogy to enhance the education system of Malaysia. Comparative analysis was undertaken to find the models and parameters used by the traditional studies. Models

like Phenomenological methodology, Online survey, interview and qualitative analysis, Grounded Theory Analysis, UTAUT, Quantitative analysis, Hybrid teaching model, Evidence based principles like digital play, real-world processes and tools etc, were applied by traditional systems. On the other hand, specific parameters were considered such as Social justice issues among teachers and students, power relationships among them, Teaching approaches, Social factors, effort expectancy, facilitating conditions and performance expectancy in terms of attitude and behavioural intention, Teacher's knowledge on subject topics, CASIS, technical skills of students, critical thinking, etc. Through the analysis, it is found that most of the research suggested pedagogical approaches for HE students. Innovative approaches like PBL, CBL, GBL, and TEL were also comparatively analysed. Based on this analysis, recommendations were provided and future works to be focussed were also explored which will help educators and researchers to improve the education system in a better way by selecting efficient pedagogical practices. Though, the study performed a comprehensive review regarding the pedagogical practice in teaching, a special focus was proffered only to the Malaysian teachers regarding their innovation in pedagogy. A future works should focus to review the pedagogical teaching practices in other developing countries in order to level up the entire education system.

COMPETING INTERESTS

There is no Conflict of Interest.

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