READINESS, ACCEPTANCE, AND CHALLENGES OF EDUCATION 4.0 AT ASIAN INSTITUTE OF MARITIME STUDIES (AIMS): BASIS FOR PROPOSED IMPLEMENTATION FRAMEWORK

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ABSTRACT

This descriptive-correlational study investigated the readiness, and acceptance of Asian Institute of Maritime Studies (AIMS) of Education 4.0 as well as how the challenges encountered by AIMS are managed as it interfaces with Education 4.0. The study utilized the descriptive-correlational research design involving 36 AIMS professors as respondents. The findings revealed that AIMS professors have high perception of AIMS' readiness for Education 4.0, with an average weighted mean of 3.31. They also had high perception of AIMS' acceptance of Education 4.0, with an average weighted mean of 3.37. Moreover, the respondents agree that AIMS is managing the challenges encountered as it interfaces with Education 4.0, with an average weighted mean of 3.17. Further, a significant relationship was noted between the level of readiness and level of acceptance of AIMS for Education 4.0 as assessed by its professors ($p=0.000<0.01$). Significant relationships were also noted between level of readiness and managing the challenges of AIMS for Education 4.0 ($p=0.000<0.01$) and between the level of acceptance and managing the challenges of AIMS for Education 4.0 ($p=0.000<0.01$). Based on these findings, a framework for implementation of Education 4.0 is proposed showing that the Delivery of Education 4.0 is hinged on Infrastructure (Infra) and Human Resource Development (HRDev). These two variables are directly influenced by the components of Readiness (Attributes of Change, Leadership Support, Internal Context and Attributes of Change Targets), Acceptance (Performance Efficacy, Effort Expectancy, Social Influence, Facilitating Conditions and Non-endogenous Mechanism, and Managing Challenges (Conflicts and Objection, Technical Challenges, Attitudes and Commitment, and Alignment). An Action Plan was also proposed for enhancing Infra and HRDev.

Keywords: Education 4.0, Descriptive-correlational study, Readiness, Acceptance, Managing Challenges

INTRODUCTION

Education 4.0 is a new concept of education that will combine real and virtual world. But this concept will bring some new risks. (Benesova, et al, 2018). The introduction of Education 4.0 in Germany in 2016 coincided with discussions about changes in the business environment driven by technology and innovation, popularly known as Industrial Revolution 4.0 or IR4.0 (Uy and Rabo, 2019). In March 2020, the pandemic caused by the Corona Virus Disease 2019 (COVID-19) engulfed the whole world - causing severe dislocation, making social distancing and quarantine part of the new normal. This situation forced higher education institutions (HEIs) in the Philippines

to fully embrace online learning classes, a major component of Education 4.0. COVID-19 has become a catalyst for educational institutions worldwide to search for innovative solutions in a relatively short period of time (Tam and El-Azar, 2020). Moreover, education has undergone a tremendous change over the past few decades The use of technology tools has been managed to engage learners in a better context (Chea and Huan, 2019). Industrial Revolution 4.0 or IR4.0 is the term for the realistic concept of the next industrial revolution (Uy & Rabo, 2019; Bughin, et al, 2018; Dadios, et al, 2018; Shahroom & Hussin, 2018; Thi, 2018; Wilkesmann & Wilikesmann, 2018; Chao, 2017 Xing & Marwalla, 2017; Schuster, et l, 2016; Schwab, 2016; Pfeiffer, 2015). IR4.0, known as digital age with big data, artificial intelligence and internet of things, has great impacts on many sectors and leads to new terms such as Education 4.0 (e.g., Lewrick, et al., 2018, Vlachopoulos, 2018, Salmon, 2017, and Schwab, 2016). The main vision of this fourth industrial revolution is the emergence of smart factories.

The review of related literature provided the necessary information to support the present study. The review of related literature showed that Education 4.0 was recognized as a response to IR4.0, greatly increasing the use of Internet technologies and cross communication tools. Education 4.0 is developed for IR4.0 and prepares qualified and qualified professionals to prepare for a very global and digital work environment (Sharma, 2019). IR4.0 is a well-researched topic (Kim, Torneo and Yang, 2019, Tay Shu, et. al, 2019, Bughin, et. al, 2018, Dadios, et. al, 2018, Mourtzis, 2018, Piccarozi, Aquilani and Gatti, 2018, Tvenge and Martinsen, 2018, Wilkesmann and Wilkesmann, 2018, World Economic Forum, 2018, Kainer, 2017, NESTA blog, 2017, Xing and Marwala, 2017, and De Bernardini, 2016). Similarly studies on Education 4.0 has been growing and expanding (Morales, et. al, 2019, Pangandaman, et. al (2019), Uy and Rabo, 2019, Benesova, 2018, Lewrick, et. al, 2018, Sharoom and Hussin, 2018, Wallner and Wagner, 2018, Anito and Morales, 2017, Chao, 2017, Ciolacu, et. al (2017), Salmon, 2017 and Baygin, et. al (2016).

In the Philippine context, a major drawback for readiness in Education 4.0 is a weak digital infrastructure. In 2018, the Philippines was ranked 57th of 79 participating countries in the Global Connectivity Index (GCI) (Montealegre, 2019). A bright spot for the country is, on the other hand, is the fact that the Philippines is the fastest-growing digital populations in the world with 63 percent of the population accessing the internet, spending an average of 10 hours a day. Digital 2019 (digital marketing community.com, 2020) reported that Filipinos are the top internet users in the world with 47 percent of our online activities spent on social media.

This study determined the preparation of the Asian Institute of Maritime Studies (AIMS), a merchant marine college in Pasay City, Metro Manila, Philippines in the implementation of Education 4.0. Specifically, the researcher focused on AIMS' readiness and acceptance of Education 4.0 as well how AIMS is managing the challenges encountered as it interfaces with Education 4.0. The findings of the study served as the basis for proposed implementation framework of Education 4.0. The three frameworks which served as theoretical lenses for this study are Aziz-Yusof's Organizational Readiness Model (2012) for readiness, the Unified Theory of Acceptance and Use of Technology (UTAUT) formulated by Venkatesh, Morris, Davis, and Davis (2003) for acceptance and the Hald & Mouristen Model of Supply Chain Performance Management System (2018) for managing the challenges encountered. From the theoretical anchorage of the study, the researcher identified the independent and the dependent variables of the study. The independent variables are the level of readiness and the level of acceptance of

Education 4.0 at AIMS while the dependent variable is managing the challenges encountered in interfacing with Education 4.0. The proposed output as shown in the operational model includes the proposed framework for implementation of Education 4.0 and an action plan that will improve AIMS' interface with Education 4.0.

METHODS

The research design used in this study was descriptive-correlational. The primary source of data were the 36 respondents of the study who are faculty members of the Asian Institute of Maritime Studies (AIMS). Secondary sources of data included books, theses, online journals and the internet to support the findings in this study. The self-made instrument by the researcher which was based on exhaustive review of the literature consisted of statements that gauged the level of readiness and acceptance as well as perspectives on how the challenges encountered with Education 4.0 are managed by AIMS faculty. Part 1 of the survey questionnaire covered the school where the respondent is connected. Part 2 dealt with level of readiness of AIMS for Education 4.0 while Part 3 focused on the level of acceptance of AIMS for Education 4.0. The last part, Part 4 centered on how the challenges encountered are managed by AIMS as it interfaces with Education 4.0.

For the internal consistency of the questionnaire, pilot testing was done to non-teaching staff of AIMS who were not part of the actual survey. Cronbach's alpha values were used to describe the reliability of the instrument used. There were good internal consistencies for readiness (0.949), acceptance (0.931) and managing the challenges encountered (0.881).

For the questionnaire, respondents were given instructions to indicate their level of agreement with the statements regarding readiness and acceptance of Education 4.0 by checking the column representing their choice in a 4-point Likert scale. To measure the respondents' level of acceptance and readiness for Education 4.0, the following measures were used:

Assigned Point	Numerical Range	Categorical Response	Verbal Interpretation
4	3.50-4.00	Strongly Agree	Very High
3	2.50-3.49	Agree	High
2	1.50-2.49	Disagree	Low
1	1.00-1.49	Strongly Disagree	Very Low

To describe the challenges faced by AIMS in interfacing Education 4.0, the following measures were used:

Assigned Point	Numerical Range	Verbal Interpretation
4	3.50-4.00	Strongly Agree
3	2.50-3.49	Agree
2	1.50-2.49	Disagree
1	1.00-1.49	Strongly Disagree

None of the items in the questionnaire were reverse scored. The higher the scores, then the more the respondents agree with the statements that constitute the items. Weighted mean and standard deviation were used to describe the respondents' level of readiness and acceptance for Education 4.0 as well as the challenges they encountered in interfacing with it. Pearson r Moment Correlation Coefficient were used to describe the relationship between the respondents' level of readiness and

acceptance for Education 4.0 as well as the relationship between level of readiness for Education 4.0 and how the challenges encountered are managed in interfacing with it. The confidentiality and anonymity of the respondents were ensured. They were informed that the data they provided will be used for research purposes only. The participants were not exposed to any mental, physical, or environmental risk, and no unethical techniques were used. They were also informed that participation is voluntary and that they were not forced to participate. No respondents were excluded based on their gender, age, race, or socio-economic status.

RESULTS AND DISCUSSION

Table 1: Level of Readiness of AIMS for Education 4.0

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Top management of AIMS is supportive of implementing Education 4.0.	3.56	Very High	1
2. AIMS has clear vision and direction for Education 4.0	3.50	Very High	2.5
3. Education 4.0, as implemented in AIMS is the most appropriate teaching-learning method in today's changing environment.	3.50	Very High	2.5
4. Education 4.0, as implemented in AIMS, is effective in addressing the needs of IR4.0.	3.44	High	4
5. I can observe the ongoing developments as well as sustainability efforts of AIMS to cope with Education 4.0 academic paradigm.	3.36	High	5
6. AIMS, as it implements Education 4.0, has a history of adopting change to better serve its customers.	3.33	High	6
7. Several top officers at AIMS are "product champions" for Education 4.0.	3.28	High	7.5
8. AIMS is adequately redesigning learning spaces for Education 4.0	3.28	High	7.5
9. AIMS has "organizational flexibility" in its implementation of Education 4.0.	3.25	High	10.5
10.AIMS, as it implements Education 4.0, actively seeks to reduce or remove conflicts within its organization.	3.25	High	10.5
11.AIMS is a strong adopter of educational technologies, including mobile earning, next-generation LMS.	3.25	High	10.5
12.AIMS is investing adequate resources as it interfaces with Education 4.0.	3.22	High	12
13. AIMS is implementing adequate training of its faculty and staff as it interfaces with Education 4. 0.	3.17	High	13.5
14. AIMS, as it implements Education 4.0, actively seeks to reduce or remove conflicts within its organization.	3.17	High	13.5

15. AIMS solicits collective feedback from its stakeholders in order to interface with the opportunities, challenges and demands brought by Education 4.0.	3.14	High	15
Average	**3.31**	**High**	

Table 1 shows the survey results for the level of readiness of AIMS for Education 4.0, as perceived by its professors. The respondents had 'high' perception of AIMS' readiness for Education 4.0, with an average weighted mean of 3.31. This means that respondents believe that AIMS has high level of readiness for Education 4.0. This is similar to the findings of the study by Tinmaz and Hwa (2019) on the readiness level of Korean students for Education 4.0 and IR4.0. Similarly, Alakrash and Razak (2020) investigated the readiness level of students of English as a Foreign Language (EFL) in utilizing technology in learning English in the classroom.

Table 2: Level of Acceptance of AIMS for Education 4.0

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Facilitating Conditions. In interfacing Education 4.0, I will encounter challenges and opportunities in order to grow personally and professionally.	3.56	Very High	1
2. Effort Expectancy: Education 4.0 is a reality in the academe today that must be embraced.	3.50	Very High	2
3. Performance Efficacy. Education 4.0, as being implemented at AIMS, will lead to better teaching-learning experiences for both the faculty and the students.	3.42	High	3
4. Effort Expectancy: Education 4.0, as being implemented at AIMS, will make students better prepared for IR4.0.	3.36	High	5.5
5. Facilitating Conditions**:** AIMS is making adequate investments to make its infrastructure and facilities matched with Education 4.0, making me accept it with a positive mindset.	3.36	High	5.5
6. Facilitating Conditions. Education 4.0 is an effective mechanism to make students prepared and competitive in today's challenging and demanding workplace.	3.36	High	5.5
7. Performance Efficacy: Education 4.0, as being implemented at AIMS, will make students feel that they are the real owners of their education.	3.33	High	7.5
8. Effort Expectancy: Education 4.0is adoptable and implementable among the teaching force of AIMS.	3.33	High	7.5
9. Facilitating Conditions. AIMS, as it implements Education 4.0, is adopting adequate organizational improvements to make its structure matched with Education 4.0.	3.31	High	9
10. Performance Efficacy: Education 4.0 will lead to students having knowledge, skills and attitudes (KSA) that are useful and responsive for IR4.0.	3.28	High	10
11. Effort Expectancy: Education 4.0 is adoptable and implementable among the students of AIMS.	3.25	High	11

Average	**3.37**	**High**	

Table 2 shows the survey results for the level of acceptance of AIMS for Education 4.0. The respondents had 'high' perception of AIMS' acceptance for Education 4.0, with an average weighted mean of 3.37, interpreted as High. This means that respondents believe that AIMS has high level of acceptance for Education 4.0. This is similar to the findings of the study by Caputo, Papa and Cillo (2019) that concluded that the concept of Education 4.0 can improve an organization's performance by considering the acceptance level for the requisite technologies. Similarly, the study of Karim, Abu and Adnan (2018) that predicts that the future of mobile learning depends largely on the level of social acceptance.

Table 3: Managing the Challenges Encountered by AIMS as It Interfaces with Education 4.0

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Related to Attitude and Commitment: Education 4.0 is a natural progression in the evolution of education.	3.52	Strongly Agree	1
2. Related to Organizational Alignment: Education 4.0, as being implemented at AIMS, is aligned with AIMS' strategy.	3.28	Agree	2
3. Related to Technical Challenges: AIMS upgraded its support infrastructures as it interfaces with Education 4.0	3.25	Agree	3
4. Related to Technical Challenges: AIMS allocates adequate spaces for Education 4.0 implementation.	3.22	Agree	4.5
5. Related to Organizational Alignment: Education 4.0, as being implemented at AIMS, is aligned with the courses offered at AIMS.	3.22	Agree	4.5
6. Related to Attitude and Commitment: AIMS faculty are highly interested in Education 4.0.	3.18	Agree	6
7. Related to Conflicts and Objections: Being knowledgeable of Education 4.0 is an advantage for any educator, career-wise	3.17	Agree	7.5
8. Related to Organizational Alignment: Education 4.0, as being implemented at AIMS, is a "natural fit" with AIMS' organizational characteristics.	3.17	Agree	7.5
9. Related to Attitude and Commitment: AIMS management and policy makers share adequate information about Education 4.0	3.14	Agree	9
10. Related to Conflicts and Objections: There are no observed apprehensions and objections of Education 4.0, as it is being implemented at AIMS.	3.11	Agree	11.5

10. Related to Conflicts and Objections: There are no observed apprehensions and objections of Education 4.0, as it is being implemented at AIMS.	3.11	Agree	11.5
11. Related to Technical Challenges: There are adequate mechanisms (assessment and evaluation tools) to measure performance of the faculty in Education 4.0 implementation.	3.11	Agree	11.5
12. Related to Technical Challenges: AIMS provides relevant training and seminars for faculty and staff to be competitive in Education 4.0	3.11	Agree	11.5
13. Related to Attitude and Commitment: I believe AIMS faculty members share adequate information about Education 4.0 among themselves.	3.08	Agree	13
14. Related to Attitude and Commitment: AIMS management and policy makers provide adequate incentives to faculty members for them to learn more about Education 4.0.	3.06	Agree	14
15. Related to Conflicts and Objections: The implementation of Education 4.0 is not creating divisions among academicians.	2.97	Agree	15
Average	**3.17**	**Agree**	

Table 3 shows the survey results for managing the challenges encountered as AIMS interface with Education 4.0, as perceived by its professors. The respondents agree that AIMS is managing the challenges countered as it interfaces with Education 4.0, with an average weighted mean of 3.17. This means that respondents agree that AIMS is managing the challenges encountered as it interfaces with Education 4.0. This is similar to the findings of the study by Wallner and Wagner (2016) that highlighted that future challenges for Education 4.0 are increasingly interdisciplinary and transdisciplinary. Likewise, Ramirez-Mendoza, et. al (2018) explored Engineering Education 4.0 program wherein the scientific activity is centered on specific challenges related to their disciplines.

Table 4: Relationship between Level of Readiness and Level of Acceptance of AIMS for Education 4.0

Indicators	Pearson r	p-value	Interpretation
Level of Readiness and Level of Acceptance of AIMS for Education 4.0	0.786 Strong correlation	0.000	Significant
Significance level @ 0.01			

As shown in Table 4, there was a significant relationship between the level of readiness and level of acceptance of AIMS for Education 4.0. The Pearson r value of 0.786 indicates a strong correlation with a probability value of 0.000 which is less than the 0.01 significance level. This means that the higher the level of readiness of AIMS for Education 4.0, the higher is the level of acceptance. This is similar to the findings of the study by Ismail, Bokhare, and Azizan (2021) that probes the influence of technology acceptance on teachers' readiness for the pedagogical usage of

mobile phone and the possible implications this influence affords. Likewise, Sun, Lee, Law, and Hyun (2020) investigated the technology readiness and technology acceptance among hotel workers that found a definitive relationship between the two variables. From a study of children who require special education, Yusof et al (2019) showed that there was a significant relationship between readiness, knowledge and teachers' acceptance.

Table 5: Relationship between the Level of Readiness and Managing the Challenges Encountered by AIMS as It Interfaces with Education 4.0

Indicators	Pearson r	p-value	Interpretation
Level of Readiness and Managing the Challenges Encountered by AIMS as It Interfaces with Education 4.0	0.857 Very strong correlation	0.000	Significant
Significance level @ 0.01			

As shown in Table 5, there was a significant relationship between the level of readiness and managing the challenges of AIMS for Education 4.0 as assessed by its professors. The Pearson r value of 0.857 indicates a very strong correlation with a probability value of 0.000 which is less than the 0.01 significance level. This means that the higher the level of readiness of AIMS for Education 4.0 the higher the management of challenges encountered. This is similar to the study by Ishak and Mansor (2020) that found a high correlation between readiness of academic staff for Education 4.0 and the expectation of challenges in Education 4.0, specifically on areas of knowledge management and organization learning. Likewise, Alakrash and Razak (2020) provided a contemporary view of teacher and students' readiness and motivation in the use of technology and their expectations of the challenges in their course on the English language. Lastly, Sharma (2019) explored the relationship between readiness of teachers and the challenges raised by human to machine (H2M) connection technologies.

Table 6: Relationship between the Level of Acceptance and Managing the Challenges Encountered by AIMS as It Interfaces with Education 4.0

Indicators	Pearson r	p-value	Interpretation
Level of Acceptance and Managing the Challenges Encountered by AIMS as IT Interfaces with Education 4.0	0.877 Very strong correlation	0.000	Significant
Significance level @ 0.01			

As shown in Table 6, there was a significant relationship between the level of acceptance and managing the challenges encountered of AIMS for Education 4.0 as assessed by its professors. The Pearson r value of 0.877 indicates a very strong correlation with a probability value of 0.000 which is less than the 0.01 significance level. This means that the higher the level of acceptance AIMS for Education 4.0 the higher the managing of challenges encountered. The study of Butt, Siddiqui, Soomro, and Asad (2020) offers a similar finding on the motivation and acceptance of teachers and students and their expectations of the challenges of Smart Education. Similarly, Jedaman, Buaraphan and Primvichai (2019) examined the acceptance in and challenges of transitioning to a sustainable Education 4.0 in the 21st century science classroom. Lastly, Masood

and Egger (2019) explored user acceptance and the associated challenges in robotics and computer-integrated manufacturing.

Proposed Framework for AIMS' Implementation of Education 4.0

The proposed framework for implementation of Education 4.0 at AIMS is shown in Figure 1. From the results of this study, particularly the insights drawn from the survey of AIMS professors, the implementation of Education 4.0 is hinged on the delivery of instructions by the professors. This delivery is affected by two inputs, the Infrastructure (Infra) the Human Resource Development (HRDev). Neither Infra nor HRDev are "isolated boxes." For instance, a key finding of this research is the need for AIMS to provide better incentives for professors to engage themselves in Education 4.0. This task is definitely HRDev but AIMS also needs to adopt processes, systems, and structure to implement the initiative abd such are covered under Infra. Hence, the placement of two arrows linking the boxes.

Both Infra and HRDev are influenced by the measures of readiness, acceptance and managing challenges. The measure of readiness in the framework focuses on five classes of antecedents that have direct effects on organizational readiness: attributes of change, leadership support, internal context, attributes of change target and IT support (Aziz and Yusof, 2012). The measure of acceptance hinges on the unified theory of acceptance and use of technology (UTAUT), which

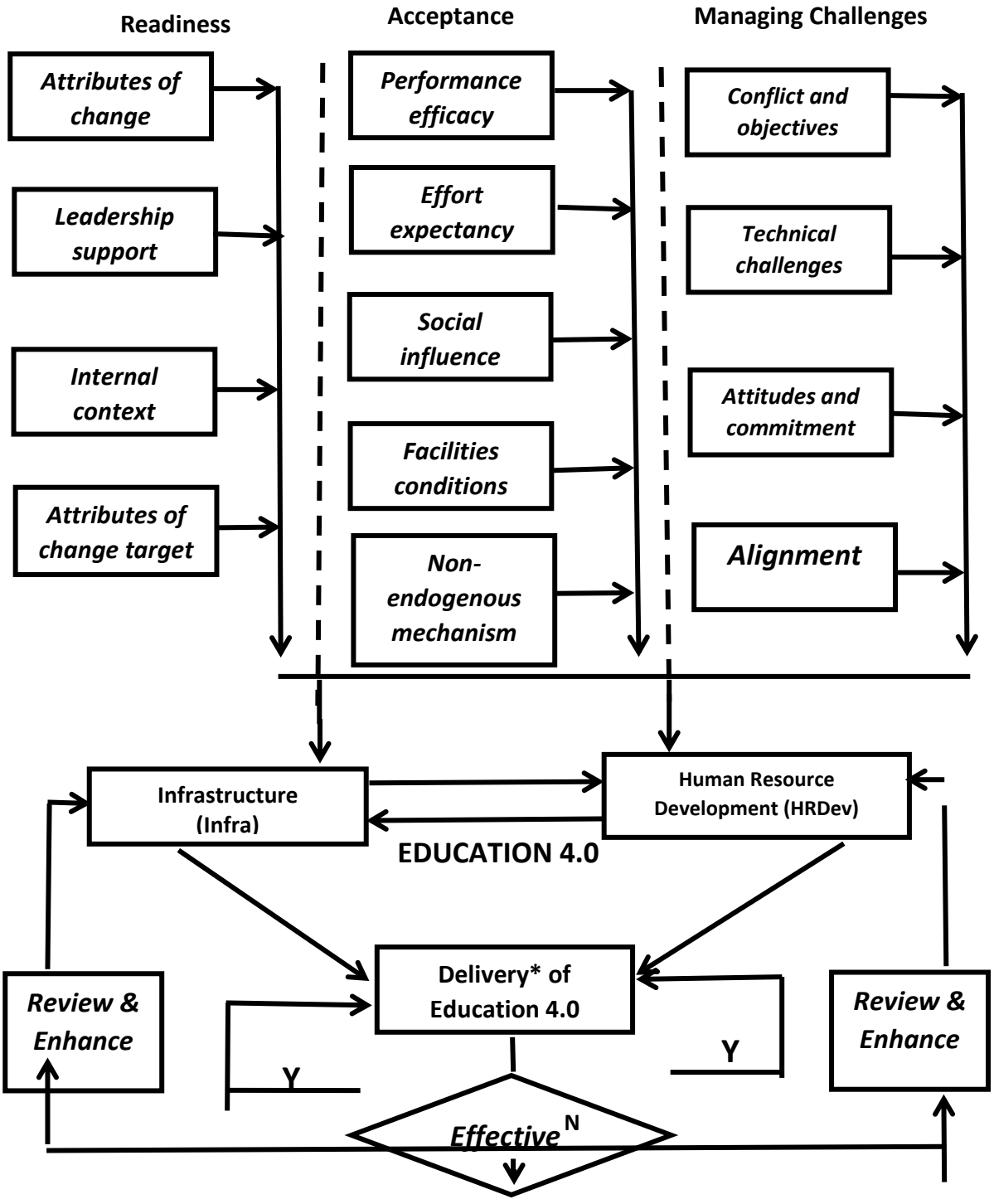

Figure 1. Proposed Framework for Implementation of Education 4.0 at AIMS

proposes four key constructs, namely, performance efficacy, effort expectancy, social influence, and facilitating conditions, to use a technology and actual technology used primarily in organizational contexts (Venkatesh, Morris, Davis, and Davis, 2003). Moreover, the measure of

managing the challenges for this framework recognizes four (4) main groups of organizational challenges, namely, conflict and objection, technical challenges, attitudes and commitment, and alignment (Hald & Mouristen, 2018).

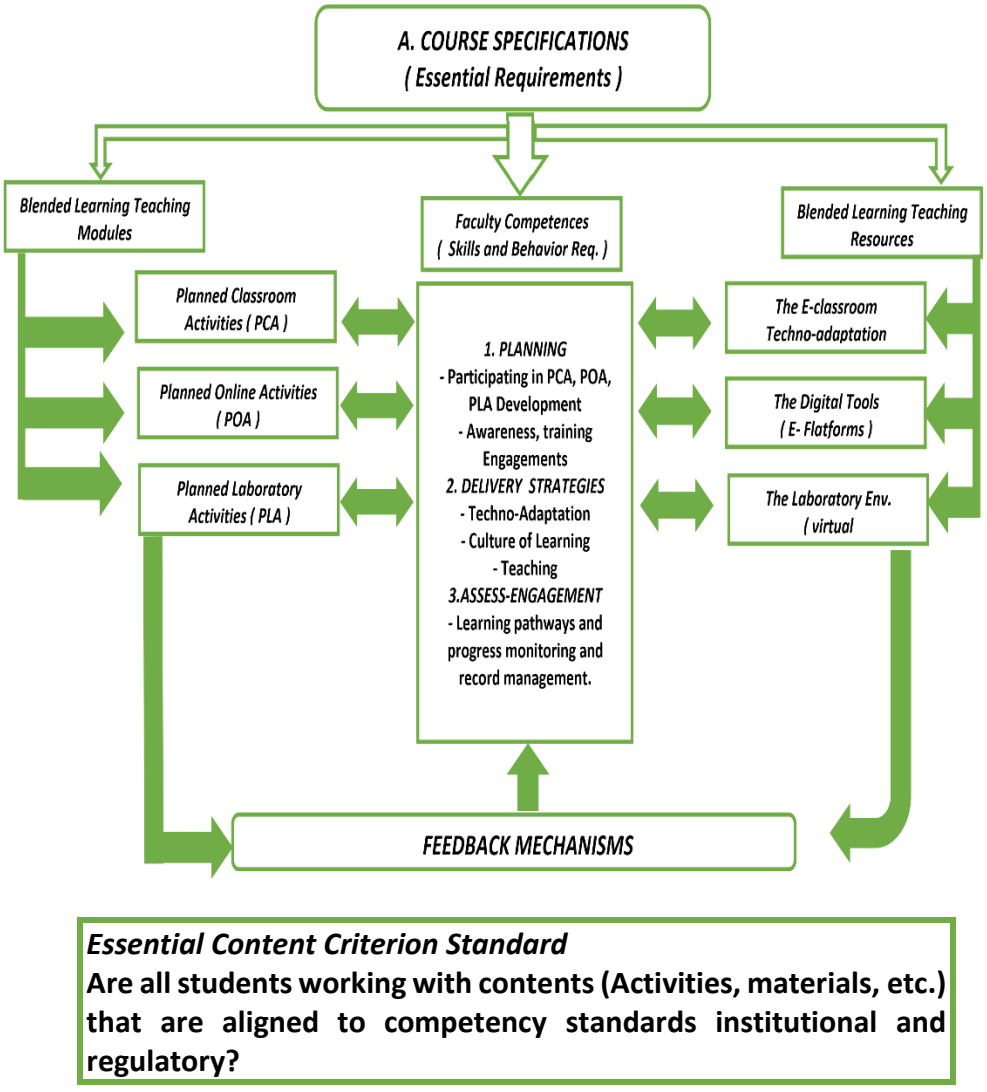

Figure 2. *Delivery of Blended Learning Teaching Model at AIMS (Adapted from AIMS presentation by Dr. F. Dalaguete, 2020)

The delivery of instructions is covered by the next diagram of the framework, as shown in Figure 2, and involves Blended Learning-Teaching (BLT) model that AIMS adopted in 2020, almost immediately during the first lockdown of Metro Manila, after being placed under enhanced community quarantine (ECQ) on March 2020. The BLT Model, one of the ways of teaching-learning deliveries under Education 4.0, was developed by Dr. Felicito Dalaguete in 2020. As this part of the Framework suggests, the essential requirements for the delivery are the course specifications (topmost box), which are drafted by each HEI in congruence with the guidance from Commission of Higher Education (CHED). Since AIMS is a maritime-focused HEI, the Maritime

Authority (MARINA) also plays a major role in developing the course specifications. From the course specifications, the Blended Learning Teaching (BLT) modules are generated by AIMS professors as Planned Classroom Activities (PCA), Planned Online Activities (POA) and Planned Lab Activities (PLA). The other two components of BLT delivery are Faculty Competence and Blended Learning Resources. Faculty Competence are manifested in Planning, Delivery Strategies and Engagement Assessment. Meanwhile, Blended Learning Teaching Resources are composed of the technology adoption through e-classrooms, digital tools and virtual laboratories.

The effectiveness of the delivery for Education 4.0 should be monitored on a timely basis. Suggestion is three reviews annually, at the end of each trimester in order to calibrate the direction of Education 4.0. Should the delivery be effective, there is no need for further revisions. However, should the delivery be no longer effective or whenever AIMS stakeholders have suggestions for improvement of delivery, there is a need for review and enhancement.

Action Plan

Congruent with the conclusion and recommendations of this study, hereunder is an action plan addressing the findings of this study.

Objective 1: Fostering the development of a high performing Education 4.0 ecosystem infrastructure within AIMS
Actions:

1. AIMS to adopt adequate organizational improvements, infrastructure upgrades and improved digital connectivity to enable the HEI to meet the requisites of Education 4.0.
2. AIMS to improve structure in soliciting feedback from its stakeholders in order to interface with the opportunities, challenges and demands brought by Education 4.0.
3. AIMS policy makers, specifically those in-charge of organization development, to adopt adequate organizational improvements to make its structure matches with the requisites of Education 4.0.
4. AIMS to ensure that the implementation of Education 4.0 is not creating divisions among professors and other AIMS personnel
5. AIMS to continually monitor and improve Effort Expectancy, which is the degree of ease associated with the use of the system thus making Education 4.0 adaptable and implementable among AIMS faculty and students. This can be done by conducted announced and unannounced surveys and interviews of AIMS faculty and students.

Timeline: During the whole academic year
Responsibility: AIMS top management, HRM Department
Outcome: A more future-proof organization interfacing with the demands of Education 4.0

Objective 2: Fostering the development of a high performing AIMS faculty and support staff who are confident in interfacing with Education 4.0
Actions:

1. Improve training of AIMS faculty to produce digitally component and confident teachers. Training to include use of new technologies for Education 4.0, ways of online assessments and creative ways to better engage students online.
2. Development of further enhancements of incentives to faculty members for them to learn more about Education 4.0.

3. Monitoring of performance efficiency, a metric that provides a means of determining the learning efficiency of instructional conditions. This will lead to students having knowledge, skills and attitudes (KSA) that are useful and responsive to both Education 4.0 and IR4.0.
4. Sharing adequate information about Education 4.0 implementation at AIMS

Timeline: During the whole academic year, 3 times annually
Responsibility: AIMS top management and HRM department
Outcome: An HEI whose faculty and non-teaching personnel are confident to meet the challenges and demands of Education 4.0

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn:

1. There is a high level of readiness of AIMS for Education 4.0. This is manifested by the very high level of top management support in implementing Education 4.0. \
2. There is a high level of acceptance of AIMS for Education 4.0. AIMS professors understand that in interfacing Education 4.0, they will encounter challenges and opportunities that will lead to personal and professional growth.
3. AIMS is managing the challenges encountered in interfacing Education 4.0. Education 4.0 is a natural progression in the evolution of education.
4. The higher the level of readiness of AIMS for Education 4.0, the higher is their level of acceptance.
5. The higher the level of readiness of AIMS for Education 4.0, the better the management of challenges encountered.
6. The higher the level of acceptance of AIMS for Education 4.0, the better the management of challenges encountered.

RECOMMENDATIONS

Based on the significant findings of the study and the conclusions drawn, the following are offered for future actions:

1. To further improve the level of readiness of AIMS for Education 4.0, the HEI should intensify the solicitation of collective feedback from its stakeholders in order to interface with the opportunities, challenges and demands brought by Education 4.0.
2. The level of readiness of AIMS for Education 4.0 may be improved by implementing adequate training of its faculty and staff, including use of new technologies for Education 4.0, alternative ways of online assessments and creative ways to better engage students online.
3. AIMS could also adopt policies, structures, and processes that aim to actively seeks to reduce conflicts within its organization as it implements Education 4.0.
4. To further improve the level of acceptance of Education 4.0, AIMS could improve the Effort Expectancy, thus making Education 4.0 adaptable and implementable among AIMS faculty and students.
5. The level of acceptance of Education 4.0 may be further improved by increasing performance efficacy. This will lead to students having knowledge, skills and attitudes (KSA) that are useful and responsive to both Education 4.0 and IR4.0.

6. AIMS policy makers should adopt adequate organizational improvements to make its structure matches with the requisites of Education 4.0.
7. AIMS policy makers should ensure that the implementation of Education 4.0 is not creating divisions among professors and other AIMS personnel. They should further enhance the incentives to faculty members for them to learn more about Education 4.0.
8. AIMS top management should ensure that AIMS faculty members share adequate information about Education 4.0 among themselves.
9. Future researchers may conduct similar study covering different variables which were not part of the present investigation like their demographic profile. Qualitative investigation can also be done to look into the lived experiences of school stakeholders as they interface with Education 4.0.

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