

# Pedagogical Challenges in Online Learning: 'Maxiagogy' as a Transformative Panacea Owing to the COVID-19 Outbreak

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## Abstract

**Purpose** – The COVID-19 pandemic has forced all sectors, including education sectors, to make impulsive adjustments. In the implementation, educational institutions at all levels have undergone rapid changes as they had to adopt online learning. This study investigates the underlying factors that raise questions and complaints from stakeholders due to the changes in delivery from the face-to-face mode to online learning.

**Design/methodology/approach** – The critical factor identified as a cause of the social confusion is a pedagogical issue. The pedagogical crisis presumably occurred due to the sudden changes from face-to-face teaching to the online learning mode. To untangle these tangled threads, this study collected data from various sources in an effort to understand the importance of the pedagogical issue in online learning. This issue needs to be investigated from diverse perspectives, ranging from: (1) the contexts that drive the acceleration of the use of online learning; (2) the evolution of the online learning generation; (3) open education, online learning, and the conception of higher education; (4) the system of online learning; and (5) the evolution of pedagogy in online learning. Methodologically, the approach is a descriptive-qualitative one through some literature review activities and a series of focus group discussions on the critical analysis. The data collected are entirely secondary data in the form of content analysis. The sources were: (a) journals; (b) reports; (c) search engines; (d) websites containing scientific articles; (e) research papers; and (f) unpublished academic papers.

**Findings** – This study succeeded in proposing a breakthrough alternative pedagogy that needs to be criticized as a transformative pedagogy, i.e. 'maxiagogy' based on communalism. We were familiar with pedagogy, andragogy, and heutagogy (including peerology and cybergogy) and cognitive-behaviourism, constructivism, and connectivism. This study finally confirmed 'maxiagogy' as the (new) transformative pedagogy (communalism-based) with its drawbacks and strengths. This is in line with the spirit of online learning for the 21st century — that is, learning is exciting, enjoyable, accessible, easy to find, reliable, and flexible.

**Originality/value/implications** – The rise of the new transformative pedagogy will not solve the real pedagogical crisis in online learning. However, this study shows that 'communalism-based maxiagogy' can be used as a transformative pedagogy with respect to the pressures of the 21st century and the demands of millennial learners, regardless of whether the Covid-19 crisis occurred or not. 'Maxiagogy' ultimately places learners at the centre of learning, with two fundamental beliefs — flexibility and trust — becoming self-directed and self-determined learners.

**Keywords:** Pedagogy, online learning, COVID-19 pandemic, connectivism, transformative pedagogy, self-determined learning.

# 1 Introduction

The sudden outbreak of the COVID-19 pandemic that hit all parts of the world has forced all sectors of life to make changes and adjustments. This coercive situation also concerns the education sectors and related stakeholders. Online learning, which has been available so far, is the only option because face-to-face learning is no longer feasible. This sudden change, of course, caused confusion which also suddenly comes. The unpreparedness of stakeholders to accept change, as a sudden blow, causes social chaos in the community (Dhawan, 2020). It is not only students and parents who face the confusion but also teachers, school management, and even education officials at all levels. They experience an atmosphere of panic with a high level of complexity.

Apart from the fear of being exposed to the COVID-19, which is very dangerous with a very high transmission rate, it raises various questions and complaints related to the implementation of education previously through face-to-face learning switching to online learning. Concerns have begun to arise, considering that it cannot be estimated when the pandemic will end.

Simultaneously, the implementation of face-to-face to online learning as it is carried out in a hurry can cause problems in learning outcomes, as partly emphasized by Nartiningrum and Nugroho (2020). Some experts even predict that if this crisis is not guardedly anticipated and handled, it will result in generation loss or educational stunting during this pandemic crisis, especially in the Indonesian context.

Many aspects must be investigated then to avoid this generation lost issues. From the initial observations, studies on the importance of the availability of technological infrastructure, the availability of qualified educators, the completeness of learning resources, financial supports, and administrative aspects have been widely studied. These implied that this study aims to ensure that the provision of online learning can safely replace face-to-face learning with the same quality of inputs, processes, outputs, outcomes, and impacts, as also highlighted by Supriyatno and Kurniawan (2020).

However, paying attention to the news during 2020 up to April 2021, especially the state of learning during the pandemic period in Indonesia, the implication of conducting online learning still raises mainly various structural concerns. We are now even familiarized with educational stunting issues in addition to the lost generation issues. Based on the analysis of existing conditions, what seems less touched, is the pedagogical aspects in online learning, as partly supported by Rapanta et al. (2020). There is suspicion that the learning processes carried out during this pandemic crisis were not cautiously considering that pedagogical aspect. It can be said then that the implementation of online learning is factually such a kind of 'zooming-in' the face-to-face class room activities using ICT without paying attention to the pedagogical aspect at all.

In plain view, things previously described are common and appear in classes at almost all levels of education. This study, therefore, aims to investigate the extent to which pedagogical elements have been included in the online learning system that has been, is being, and will be implemented so far. At the same time, this study aims to find a breakthrough transformative pedagogy as an alternative so that online learning can be avoided as a cause of lost generation and/or educational stunting problems, again, especially in the Indonesian context.

## 2 Previous and Current Related Studies

Conceptually, this study considers some basic notions that will eventually be linked to pedagogical aspects, particularly pedagogy in online learning. This study finds (as inspiration and needs to be elaborated further) the need to alertly include pedagogy in online learning. This is used as an analytical tool to initiate transformative pedagogy which suitable for online learning. This is crucial given the rush to implement online learning due to the COVID-19 pandemic crisis. The following elaborative description is a structured study that underlies the intended transformative pedagogy as an alternative to anticipate and deal with various pedagogical challenges.

**First.** On the online learning (r)evolution. As an inspiration, the study refers to the idea of and then modified from both Taylor (2001) and McTee (2010) as presented in Figure 1 and summarized in Table 1.

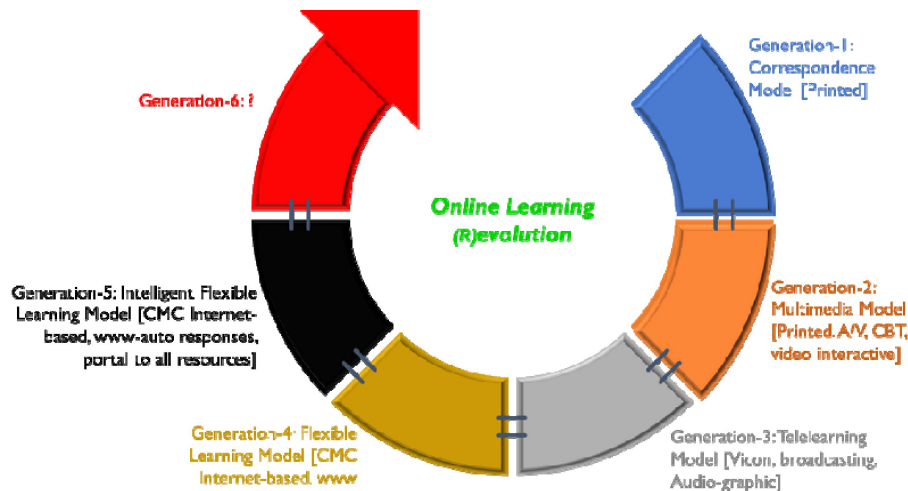


Figure 1. Online Learning (R)evolution

Table 1. Traits an Online Learning and Associated Technology

Models of DE and Associated Delivery Technology	Characteristics of Delivery Technology					Institutional Variables Cost → 0	1. Key features Vicon, audio-graphics, www & Internet www – resource sharing asynchronous-live communications, integration of media and technology for multiple platforms, learner and teacher optims for the rise of web 2 technologies	4. Curriculum As more knowledge producers enter the market (formal, informal and self-publishing) the curricula increasingly become open and fluid. OER, YouTube and other social technologies are changing the nature of knowledge, the curriculum and the validation of knowledge	6. Medium Text, images, sound and video
	FLEXIBILITY			Highly Refine Materials	Advance Interactive Delivery				
	TIME	PLACE	PACE						
1. Interactive multimedia Delivery	Yes	Yes	Yes	Yes	Yes	Yes	2. Pedagogy Behaviorism, cognitivism, constructivism, social constructivism	5. Interaction Content starting to move away from the university – asynchronous and synchronous interaction – mass delivery becomes problematic and demands for interaction challenge ICTs	7. Production Printing press, sound and video, film recording and computer design, programming, user involvement
2. Internet-based access to www resources	Yes	Yes	Yes	Yes	Yes	Yes			
3. CMC – Using automated response systems	Yes	Yes	Yes	Yes	Yes	Yes			
4. Campus portal access to institutional processes-resources	Yes	Yes	Yes	Yes	Yes	Yes			

**Second.** On open education, online learning, and conceptions of higher education. The study refers to Belawati (2019), as shown in Figure 2.

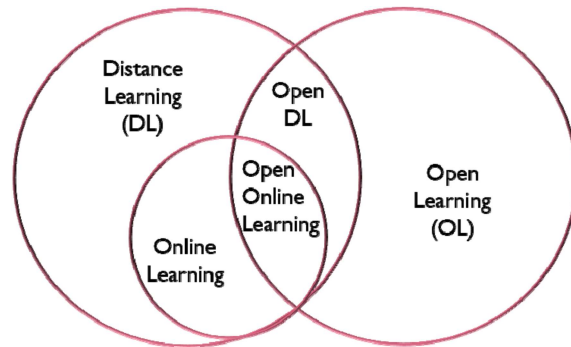


Figure 2. Distance Learning, Online Learning Open Learning

Correspondingly, at a theoretical level, the basic concept of higher education has four main characteristics (Barnett, 1992). The first form is higher education as a resource or teaching university, which functions to produce highly qualified human resources. The second form is higher education as a research university. The third form is higher education as an efficient management university. The fourth is higher education as a university for life enrichment. Another form of higher education, introduced by Clark (2001), is entrepreneurial university. Each form of those universities has specific and unique characteristics to influence the choice of learning pedagogy to be applied, especially in an online learning mode of delivery.

**Third.** On educational and online learning systems. Regarding this concept, the study refers to the ideas formulated by Sembiring (2020a) and Sembiring (2020b), which are simplified as illustrated in Figure 3.

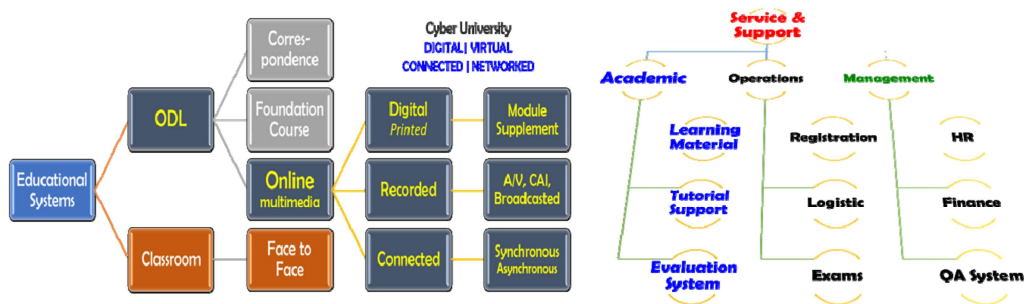


Figure 3. The Educational and Online Learning Systems

**Fourth.** On the evolution. At this stage, the study refers to Anderson and Dron (2011), as summarized in Table 2. Besides, Siemens (2005) elaboratively contended that learning is a complete knowledge that can be acted upon, which originated and may have sources outside of oneself.

Moreover, according to Belawati (2019), knowledge resulted from interactions in various network nodes. This implied that learning is a self-development activity. This description leads to the term called distributed learning. Students become partners

who create knowledge with the teacher. This means greater flexibility in the curriculum, more considerable autonomy for learners, and more effective use of technology where learning took place.

Table 2. Three Generations of Distance Education Pedagogy

Gen. of DE Pedagogy	Technology	Learning activities	Learner granularity	Content granularity	Evaluation	Teacher role	Scalability
Cognitive-behaviourism	Mass media: Print, TV, radio, one-to-one comm	Read and watch	Individual	Fine: scripted and designed from the ground up	Recall	Content creator, sage on the stage	High
Constructivism	Conferencing (A/V and Web), many-to-many communication	Discuss, create, construct	Group	Medium: scaffolded and arranged, teacher-guided	Synthesize: essays	Discussion leader, guide on the side	Low
<b>Connectivism</b>	Web 2.0: Socnet, aggregation & recommender systems	Explore, connect, create, and evaluate	Network	Coarse: mainly at object and person level, self-created	Artifact creation	Critical friend, co-traveler	Medium

**Fifth.** On learning experience and learning focus. Here, the study mainly refers to Garrison (2009) about the community of inquiry in online learning. The three main elements of the learning experience: cognitive presence, teaching presence, and social presence. Cormier (2008) previously included community as a curriculum. This implies that environmental elements are included as a part of the learning experience. In other words, Sembiring (2008) and Anderson (2017) mention the importance of student presence in making learning experiences comprehensive and integrated (as part of environmental presence). The summary of these notions is comprehensively illustrated in Figure 4.

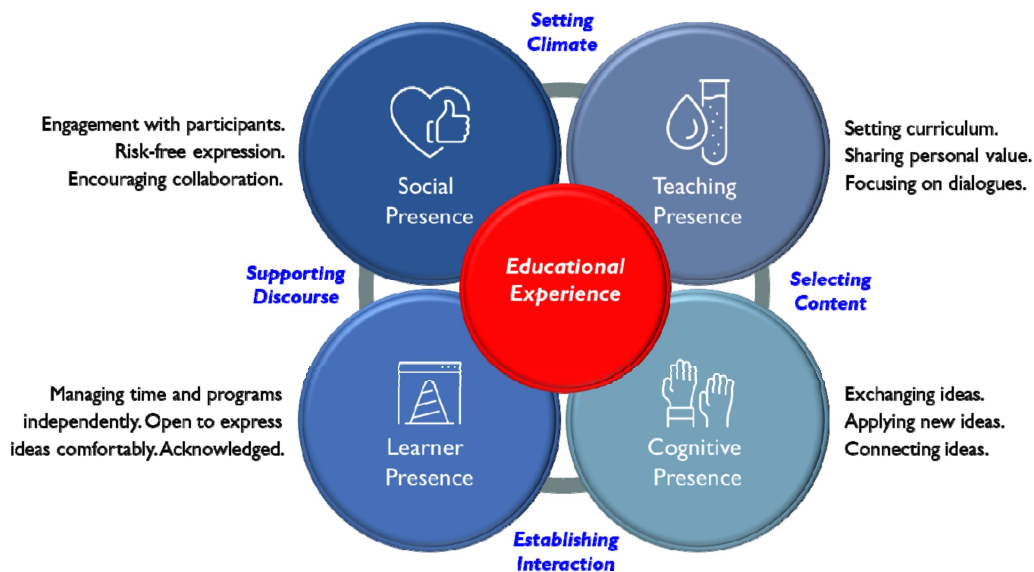


Figure 4. The Four Main Elements of Learning Experience

### 3 The Context and Research Design

In this study, we use several definitions, starting with the origin of the word education. Education is extracted from two Latin words, i.e., *educare* and *educere*, which means to form and lead, respectively (Bass & Good, 2004). Furthermore, we define pedagogy as an educational activity based on educational theory. Andragogy is the process of involving adult learners in a structured learning experience. Heutagogy is an educational activity that puts students in full responsibility for what and when they must learn, as in a learning framework, and then it puts adults responsible for their progress (Heick, 2015).

Methodically, this study utilizes a descriptive-qualitative approach, following Creswell (2015). That is contextually to comprehend the importance of online learning in a crisis period due to a pandemic outbreak. This outbreak forces learning mode to shift from face-to-face to online learning. Apart from carrying capacity to facilitate learning, including adequate communication and information technology aspects, it turns out that other critical and potential issues go unnoticed. The problem is related to the pedagogical issue that is adequate for online learning. And, not to cause obstacles in the implementation stage. Pedagogical issues related to online learning that pose challenges, which may become new crises, need to be cautiously identified and considered.

For this reason, it is necessary to carry out an investigation and assess through the identification process with respect to previous and current related studies. It is essential to collect data (information) to describe latent pedagogical problems that can become obstacles in implementing online learning, which is detrimental to many parties, mainly to most students. The research tool used to analyze data (information) collected from various sources in this research is in content analysis form (descriptive-qualitative approach) under structured literature review activities and focus group discussions series with experts by following Mishra (2016).

This study obtained material in the conceptual and operational thoughts as a qualitative consideration and is entirely based on secondary data. The collection and systematic review process are carried out for each literature collected. Secondary data sources used were obtained from: (1) journals, (2) reports, (3) engine searches, (4) websites containing scientific articles, (5) research papers, and including some (6) unpublished scientific pieces of work.

The results of collecting, analyzing, and summarizing data/information are used as the basis for proposing the breakthrough ideas. The idea of a breakthrough is expected to be a transformative resolution to offer 'new pedagogy' in online learning. This transformative idea is also in accordance with the skills for 21<sup>st</sup>-century skills, regardless of a COVID-19 pandemic is present or not. This idea then needs to be scientifically tested to find out its reliability.

### 4 The Breakthrough Ideas and Discussions

Having summarized information obtained and intensely discussed in focus group discussions series as described in the previous section, this study conclusively considers the presence of learners (including their environment) as a gap that must be addressed and amended associated with online learning. In face-to-face interaction,

this gap (students' presence) is not quite disturbed from a pedagogical perspective. Therefore, the essential design community of inquiry by Tucker (2019), illustrated in Table 3 (refer to the last row), needs to add **one new** element, i.e., learners' presence.

Table 3. The New Community of Inquiry

The New Community of Inquiry Plus	
<b>Social Presence</b>	<i>What?</i> The ability to assert one's belief, feeling, and personality to establish relationship, trust and open communication on and offline <i>How?</i> Build community with activities and icebreakers, encourage respectful discussions on and offline, and give learners time to work collaboratively on shared tasks
<b>Cognitive Presence</b>	<i>What?</i> The ability to construct meaning through a combination of individual experience and reflection the social negotiation and collaborative constructivism <i>How?</i> Teach students how to work through practical inquiry model – triggering event, exploration, integration and resolution
<b>Teaching Presence</b>	<i>What?</i> The ability to design, facilitate and direct the social and cognitive presence to achieve high quality learning outcomes for students <i>How?</i> Design on and offline learning to engage students to collaborative constructivism. Facilitate relationship building and provide individualized support. Guide the learning happening on and offline
<b>Learner Presence</b>	<i>What?</i> The ability and freedom to decide what to learn and when to learn it with others by applying any kind of available learning resources and tools. <i>How?</i> Equip the self with the necessary information related to the field to be studied to support career and self-esteem

This study dares to describe what and how ‘maxiagogy’ is harmonized with what had been stated by experts. What is truly meant by communalism-based ‘maxiagogy’? ‘Maxiagogy’ is an approach that gives students the ability and freedom to decide what to and when to learn it with or without other supports using kinds of available and appropriate learning resources and tools. Then, how can ‘maxiagogy’ be practically and successfully implemented? ‘Maxiagogy’ equips students with various information related to the field of study they take to support their career and life towards self-esteem based on self-determined learning.

How to ensure, or what guarantees, that ‘maxiagogy’ will be compatible with online learning systems? Maxiagogy must be designed, recognized, and accomplished by following the inspiration introduced by Santaniello (2017), illustrated in Figure 5.

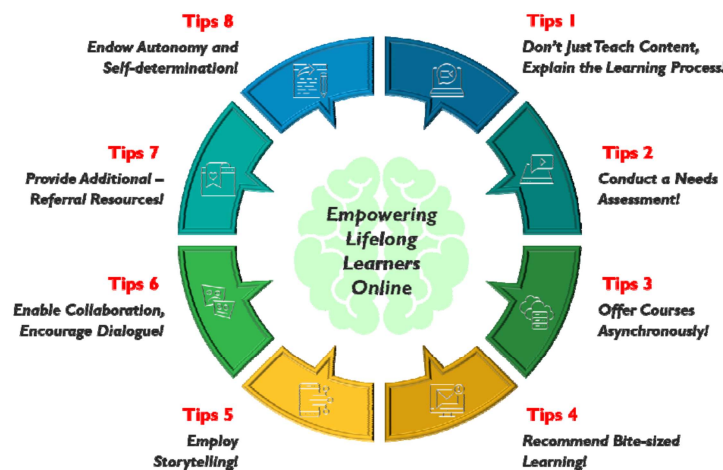


Figure 5. Tips to Empower Lifelong Learners Online

Those eight tips (Figure 5) are ways of guaranteeing to empower students to become lifelong learners in online learning. This is based on the belief that whoever teaches in learning, he is learning! Correspondingly, anyone who learns in learning mode is also actually learning!

What should then be considered and how to design pedagogy in online learning? Inspired by Stommel (2020), developing pedagogy for online learning – now referred to as ‘communalism-based maxiagogy’ – can be ensured by inclusively included two main keywords: flexibility and trust!

Again, the main principles in any pedagogy, especially in emergencies like this pandemic crisis, are flexibility and trust. On this basis, designing online learning that has considered the elements of pedagogy in an integrated manner includes several critical features, as illustrated in Figure 6.

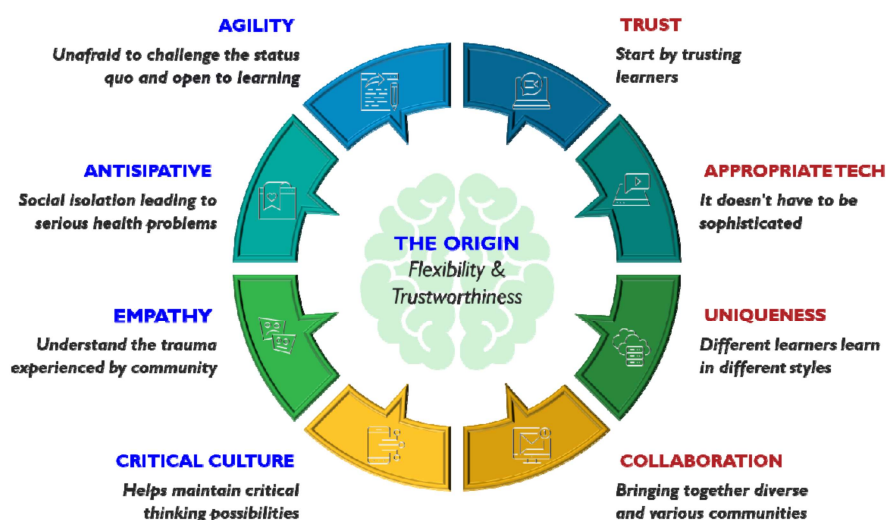


Figure 6. Inclusive Pedagogies for Online Learning

At this stage, we can link and integrate comprehensively in an evolutionary manner, starting from pedagogy, andragogy, heutagogy, and ‘maxiagogy.’. The evolutionary “gogy” series, as presented in Table 4, is linked to dependencies, learning resources, learning reasons (and focus), motivation, and the role of the educator.

At this stage, under ‘maxiagogy’ as a transformative pedagogy for online learning, students become fully autonomous (self-directed learning leads to the self-determined learner). With features that align with the demands of 21<sup>st</sup>-century learning and the coercion of the COVID-19 pandemic outbreak, ‘maxiagogy’ is just right to be considered an alternative to the ‘new pedagogy’ online learning.

Now let us cautiously notice the traits of ‘maxiagogy’ as illustrated in Table 4. Let us concentrate on the last column of Table 4. Under the six main characteristics, we are convinced that the center of learning under ‘maxiagogy’ is the student. This fact will undoubtedly lead to providing the opportunity to the student to be a fully autonomous learner. The 21<sup>st</sup> century calls for the 21<sup>st</sup> skills. The traits of the 21<sup>st</sup> learners tend to put the universe as a resource of learning. That is why the basis of this new ‘gogy’ is referred to as the so-called ‘communalism-based.’



Table 4. Evolution of Pedagogy, Andragogy, Heutagogy, and ‘Maxiagogy’

	<b>Pedagogy</b> Children Learning	<b>Andragogy</b> Adults Learning	<b>Heutagogy</b> Self-Directed Learning	<b>Maxiagogy</b> Fully-Autonomous Learning
<b>Dependence</b>	Learner is dependent. Teacher determines on what, how and when to learn.	Adults are independent. They strive for autonomy and self-direction in learning	Learners are interdependent. They identify the potential to learn from novel experiences and manage their own learning	<i>Extremely autonomous</i>
<b>Resource of Learning</b>	Learner has few resources. Teacher devises transmission to store knowledge to learner's head	Adults use their own experiences and other's experiences	Teacher provides some resources but the learner decides the path by negotiating the learning	<i>The Universe (Communities)</i>
<b>Reasons for Learning</b>	Learn to advance to the next level	Adult learns when they experience a need to know or to perform more effectively	Learning is not necessarily linear and , planned, but on the potential to learn in the novel situation	<i>Humans who benefit the universe without limits</i>
<b>Focus of Learning</b>	Learning is subject centred, focused in prescribed curriculum and planned sequences according to the logic of subject matter	Adult learning is a task or problem oriented	Learner can go beyond problem solving by enabling pro-activity using their experiences (reflection, interaction with others)	<i>That is fun and needed by the development</i>
<b>Motivation</b>	Motivation come from external sources	Motivation stems from internal sources. The increased self-esteem and recognition come from performance	Self-efficacy and knowing how to learn, creativity, ability to use this qualities in novel and familiar situation and working with others	<i>Self-esteem Self-determined</i>
<b>Role of the Teachers</b>	Designs the learning process, imposes materials, is assumed to know best	Enabler or facilitator, climate of collaboration, respect and openness	Develop learner's capability (How to learn, high self-efficacy, work with others)	<i>Almost wiped out</i>

## 5 Closing Notes and Follow-Up

From the previous description, in accordance with the objectives of this study, it can be mapped that there could be pedagogical problems in online learning. Pedagogical issues in learning are caused by the haste in online learning on the one hand and a shift of learning orientation on the other hands. Therefore, this study has convincingly proposed transformative pedagogy as an alternative to deal with the pedagogical crisis in implementing online learning due to a pandemic outbreak. Chronologically, the evolution of those "gogy" in online learning is illustrated in Figure 7.

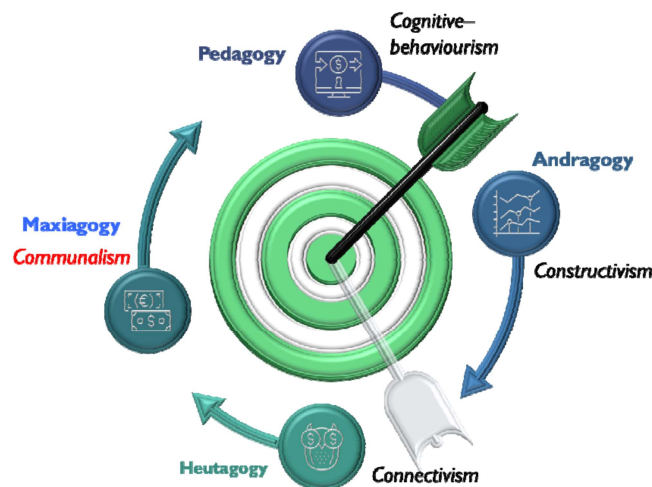


Figure 7. Evolution of Pedagogy from Time to Time

Figure 7 exhibits that ‘maxiagogy’ will become a ‘new’ pedagogy appropriate for online learning. Additionally, it is in accordance with the 21<sup>st</sup>-century learning milieu. Conclusively, ‘maxiagogy’ is defined as a transformative and alternative learning approach that utilizes elements of art, science, and skills in managing learning

processes using scattered and connected resources with the help of appropriate technology to prepare functionally and sustainably smart, character, and independent human being in the digital era.

The goal of implementing ‘communalism-based maxiagogy’ is to realize learning, especially in online learning, so that it is contextual, situational, and functional. With this kind of approach, learning that motivates and inspire students can be realized even through online learning. The essence of applying ‘communalism-based maxiagogy’ is to impress students to be more curious, feel at home, be addicted, and finally fell in love with learning, as partially emphasized by Kesler (2019). Conceptually and operationally, the characteristics of online learning must be exhaustively framed and making learning exciting and enjoyable from students’ perspectives. Apart from being accessible, online learning must be easy to find and reliable as well as flexible.

Reflection for future consideration! How to make these demands take place? Let us grasp the following five approaches (Lynch, 2019): (1) challenge ourselves, (2) change the classroom dynamic, (3) present alternative views, (4) change our assessments scheme, and (5) encourage activism.

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