Contextualizing Lecturer Performance Indicators to Online Teaching and Learning Activities: Insights for Application during the COVID-19 Pandemic And Beyond

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Abstract: The purpose of this research study is to explore insights to create more contextual lecturer performance indicators (LPIs); and to gain a fairer and more useful evaluation tool for lecturers in the online environment during the COVID-19 pandemic. This significant change in conditions has forced higher education to understand the new requirements, especially of lecturers, who have played a central role in creating engaging moments for students in online classes. This study adopts a qualitative approach, based on the need for a more in-depth exploration of new phenomena. It explores students' daily lives in class, which were expressed through social media, and gains further understanding through in-depth interviews with students and lecturers. The results indicate that most of the items taken from the Social-Task-Technology-Fit (STTF) framework remain the same; there are not many changes compared to the era before the pandemic. However, some aspects have new meanings that need to be revisited to capture the lecturers' performance in the new context. Three new themes emerged from the exploration study which have never been discussed in previous studies on LPIs for online teaching, especially in abnormal conditions such as a pandemic. The first theme concerns the variations in digital literacy of lecturers and the implications for lecturers' performance. The second theme is the dynamic ratio of social versus task activities, which implies the need to focus on academic (task-oriented) or non-academic (social) tasks. The third theme is the degree of controllability of each performance. This study provides awareness of the importance of weighting in evaluating lecturer performance, especially when not all lecturers are digitally literate, not all factors are controllable, and the ratios between social versus task requirements are not the same. These weighted evaluations have never been discussed in previous studies, which mainly used quantitative surveys. In addition, these insights can also be applied to online learning beyond the pandemic. The study results can be used by higher education information management to design more contextual LPIs for the early detection of issues with lecturer performance.

Keywords: Contextual, lecturer performance indicators, online learning, COVID-19, student satisfaction

1. Introduction

Worldwide, the spread of the COVID-19 virus has caused significant changes in social and organizational interactions, and the vulnerable education sector is no exception. However, the learning system has to continue, especially to meet the needs of students who are like customers in the context of higher education. The general trend of education systems worldwide has been to respond to the pandemic with 'emergency e-learning' prototypes, marking a rapid transition from face-to-face classrooms to online learning systems. This significant change in conditions has forced higher education to understand the new requirements, especially of lecturers, who have played a central role in creating engaging moments for students in online classes. Therefore, universities should also adapt lecturers' quality measurements (Latip et al., 2019). The tools for lecturer quality evaluation, or lecturer performance indicators (LPIs), need to be adjusted, using more relevant measures. This study explores insights to create more contextual LPIs, and to gain a fairer and more useful evaluation tool for lecturers in the online environment.

Higher education institutions have equipped campuses with various technologies through platforms and devices to support virtual learning, even purchasing sophisticated equipment to be able to better provide online learning (Bradford and Wyatt, 2010; Baber, 2020). Many institutions and corporations have increased their readiness to conduct online meetings to maintain the quality of their online interaction. However, the main actors who deliver services to students are the facilitating lecturers, so the focus should be on the technology and the extent to which lecturers have used this technology to serve students.

Understanding of the latest conditions regarding changes in student satisfaction in terms of lecturer performance is generally still superficial. Several studies using quantitative surveys have mapped factors that

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influence student satisfaction in the classroom during the ongoing COVID-19 pandemic, especially those related to lecturer performance (Basuony et al., 2021; Butler, Samuels and Peditto, 2021; Yeung and Yau, 2022). Several surveys identified factors significantly affecting student satisfaction, for example, a study by Basuony et al. (2021) in Egypt identified platform type, class time, level of interest, self-motivation, and task, while a study by Gopal, Singh and Aggarwal (2021) in India highlighted effective communication and creating a comfortable discussion space.

Student satisfaction during the learning process was not only recorded at the end of a lecture through a survey sheet but was recorded while the process was still ongoing. Stories built through narratives, either directly or indirectly (through social media), are expressions of students' daily lives that reflect satisfaction with their lecturers (Hansen and Lee, 2013; Maulana and Setiawan, 2021). A study by Shehzadi et al. (2020) stated that stories on the internet about online learning experiences affect the reputation of higher education as a brand. A pleasant learning experience in the classroom will trigger students to talk about positive aspects of their social network (Baber, 2020; Chen et al., 2021; Maulana and Setiawan, 2021). Universities should ensure that students get an online learning experience commensurate with their expectations (Mark, 2013). Therefore, lecturers, as central actors who interact directly with the students, should be guided to create exciting moments during online classes.

Narratives about the new phenomena of online learning could be collected in the form of diverse stories derived from personal experiences of online classes. Insights into the changing phenomena of students' views on the quality of lecturers during this pandemic are not only obtained by employing surveys but can be observed from students' daily lives talking about campus life stories. By observing social media, insights to improve LPIs can be collected as materials for designing the new LPIs for online learning situations, especially in the context of the COVID-19 pandemic.

This study aims to enter directly into students' lives and to explore more deeply what changed in students' perspectives on the ideal lecturer during this pandemic. This study tries to capture insights directly from student stories and experiences related on social media, complemented by validation through in-depth interviews. Insightful stories from students' experiences can be used as input for compiling new LPIs, because they can provide a more complete picture of the online learning situation within the framework of a pandemic. Insights from this research are expected to be material for a more contextual LPI design, according to the needs emerging during a pandemic. In addition, they can also be applied to online learning beyond the pandemic.

This paper continues with a review of factors influencing student evaluations of lecturer performance, looking at what changes have occurred during the COVID-19 pandemic when all teaching and learning activities had to be conducted online. The following sections present the research methodology, results, discussion, conclusions, and recommendations of the research study.

2. Literature review

2.1 Lecturer performance indicators

Lecturer performance, which is one of the components of student evaluations, significantly contributes to student satisfaction, affecting a university's image and student loyalty (Helgesen and Nesset, 2007). In addition, university image is frequently related to students' selection of educational institutions.

To facilitate the detection of problems in evaluating lecturer performance, the factors used in assessing the success of lecturers in terms of their work are grouped into specific categories. In 1995, a framework known as the Task-Technology-Fit (TTF) was developed by Goodhue and Thompson (1995); this framework was used as the basis for the present study. Lu and Yang (2014) have recently added a new dimension, by dividing performance into three categories, namely task-oriented, technology-oriented and social-oriented characteristics (Social-Task-Technology Fit or STTF framework).

The change from face-to-face learning to online learning, especially during the pandemic, has caused a shift in university students' value needs and satisfaction. Therefore, the way to assess lecturer performance also needs to be revised. Of the three categories, namely tasks, technology and social aspects, it is necessary to review which category has changed the most. Not only that, even for each factor in each category, the relevance must be reappraised. Even though the type of factor is recorded using the same terms, this does not necessarily mean

the same thing. Moreover, this needs attention from university managements, so that the method used to assess lecturers is contextual to the latest situation during this pandemic.

There have been many discussions in previous studies about the tasks, technology, and social aspects of teaching performance, which were discussed in terms of all the aspects or only a few aspects that happened to be the topic of study. The next sections elaborate on the extent to which each aspect had attracted the attention of researchers and universities during the pre-pandemic period. Then, it is also considered whether new perspectives and insights need to be considered, so that the assessment of lecturers in online learning is not confined to the past context but adapted to the present.

2.2 Task-oriented factors

Teaching quality is an essential factor that lecturers must consider to increase student satisfaction. The knowledge and competencies possessed by lecturers have positive implications for student learning motivation (Latip et al., 2019; Baber, 2020; Long, Ibrahim and Kowang, 2013; Opatha, 2020). This can be seen in the way lecturers give attractive, broad-minded presentations about the material they teach (Long, Ibrahim and Kowang, 2013; Gee, 2018), thereby making the material clearer for the students. At the same time, this way of teaching increases students' responsiveness, impacting their engagement with lecturers (Patras and Hidayat, 2020; Saxena, Baber and Kumar, 2021). Students appreciate lecturers who are committed to paying attention to their academic achievements (Sopiah and Sangadji, 2020). In offline learning, lecturers directly motivate students towards academic achievements (Latip et al., 2019). Therefore, knowledge, competence, motivation, responsiveness and clarity in explaining the material describe the teaching qualities of lecturers that can increase students' satisfaction.

To provide teaching that is easily understood and accepted by students, teachers need to develop various teaching methods. This is important because engaging teaching techniques can increase student interest, attention and satisfaction (Bradford and Wyatt, 2010; Long, Ibrahim and Kowang, 2013; Tratnik, Urh and Jereb, 2019; Gee, 2018). This is in line with the results obtained by Opatha (2020), according to which students observe lecturers' teaching habits or culture to determine the suitability the learning methods applied by the teacher. Students in the pre-pandemic period tended to prefer face-to-face learning with teachers because they could take advantage of institutional learning facilities (Bradford and Wyatt, 2010; Tratnik, Urh and Jereb, 2019). In addition, students could interact directly with one another and the teachers (Long, Ibrahim and Kowang, 2013). Quality lecture notes, engaging learning activities, and helpful input and assignments provided by the lecturers according to the capacity and courses taught are aspects that determine student satisfaction (Gee, 2018; Hartshorne et al., 2020).

2.3 Technology-oriented factors

The infrastructure aspect has been widely discussed. Shehzadi et al. (2020) and Rapanta et al. (2020) have suggested that a university's readiness to provide electronic information infrastructure affects student satisfaction with the online learning experience. The quality of e-service and e-information positively contributes to student e-learning, which ultimately leads to student satisfaction (Shehzadi et al., 2020). Lecturers also need to consider students' readiness to participate in online learning experiences (Rapanta et al., 2020).

Lecturers need to focus on students' ability to access technology during online learning during the pandemic, because not all students have equal access to digital devices and technology (Joshi, Vinay and Bashkar, 2021; Pokhrel and Chhteri, 2021). Another problem is access to the internet network, which is vulnerable to instability (Basuony et al., 2021). Teachers need to provide a backup system for student attendance when there is internet network disruption (Rapanta et al., 2020). In addition, there are many disturbances beyond a student's control that can hamper learning, such as external interruptions, power outages and lightning storms that impact the stability of the internet network (Hamdan et al., 2021).

2.4 Social-oriented factors

One widely discussed factor that affects students' satisfaction with their online learning experience is social presence, which refers to students' perceptions of the absence or presence of other people in the classroom (Richardson et al., 2017). Social presence is one factor that influences students' satisfaction with their online learning experiences (Zhan and Mei, 2013; Andel et al., 2020; Richardson et al., 2017). In the context of online learning, student-student interactions are limited to cyberspace interactions, which can lead to feelings of

isolation (Baber, 2020; Tümen Akyildiz, 2020). Weidlich and Bastiaens (2017) also suggested that social interaction affects student satisfaction in online learning. From these studies, it can be concluded that social aspects need to be considered when implementing online learning. Poor social interaction or a lack of other people in the classroom during online learning can result in students' dissatisfaction with the learning experience.

Table 1: Performance indicators of lecturers

Indicator	Description	References
Technology oriented		
Digital literacy	Ability to operate technology	Ryan and Scott, 2008; Tomczyk, 2020; Wu et al., 2022; Çetin, 2021
Access to technology	Availability of technology tools	Shehzadi et al., 2020; Rapanta et al., 2020; Krumsvik, 2014; Laurillard, 2008
Task oriented		
Knowledgeable (content)	Competent in subject matter and clarity of content	Douglas, Douglas and Barnes, 2006; Voss, Gruber and Szmigin, 2007; Long, Ibrahim and Kowang, 2013; Gee, 2018; Fielding, Dunleavy and Langan, 2010; Gibson, 2010
Class dynamic skills	Engaging discussion	Samian and Noor, 2012; Su and Wood, 2012
Creativity	Fun experience	Wong, Tong and Wong, 2017; Mourlam et al., 2020; Gao, Jiang and Tang, 2020; Çetin, 2021; Su and Wood, 2012
Committed & Motivated	Focused, monitoring student attendance	Amzat, 2017; Xiao and Wilkins, 2015; Dachner and Saxton, 2014; Dziuban et al., 2015
Social Oriented		
Sociable & Friendly	Social presence and interaction	Richardson et al., 2017; Baber, 2020; Tümen Akyildiz, 2020; Zhan and Mei, 2013; Andel et al., 2020
Accessible	Accessible	Douglas, Douglas and Barnes, 2006; Fielding, Dunleavy and Langan, 2010; Gibson, 2010; Su and Wood, 2012
Empathy	Empathy	Douglas, Douglas and Barnes, 2006; Meyers et al., 2019; Stojiljković, Djigić and Zlatković, 2012

2.5 Expectations of lecturers during the COVID-19 pandemic

According to Xiao and Wilkins (2015), increasing tuition fees leads to students demanding more for their money, which shifts the role of lecturers according to the students' perspectives. There is a shift in the expectations regarding lecturers, in which students perceive that the lecturer must provide something more than just teaching. One of these is that the lecturer will be a tutor who can guide students; students expect to have an engaging experience during the teaching and learning process (Wong, Tong and Wong, 2017). During the pandemic, when students have to continue to pay tuition fees to universities, even though the service they receive is much reduced, the service level of lecturers must be maintained, even increased.

There have been many studies that have raised this shift in student satisfaction regarding lecturers during the pandemic, in various countries, including Egypt (Basuony et al., 2021), China (Lei and So, 2021), Sri Lanka (Hettiarachchi et al., 2021), Thailand and Indonesia (Darawong and Widayati, 2021), New Zealand (Adler et al., 2021), and Canada (Butler, Samuels and Peditto, 2021). Almost all of these studies used quantitative tools in the form of surveys. Studies that use qualitative tools are still limited; one example is the study by Bell (2022) in the United Kingdom, which used in-depth interviews and group discussions. This study was qualitative because it wanted to explore more insights into student satisfaction during the pandemic. The difference with studies in the UK is that these studies enter directly into students' lives, based on their stories on social media. Many of the reasons for this change in student satisfaction have no references to compare them with, because pandemics are very rare and unpredictable, and therefore the context of COVID-19 is a unique situation.

The factors that are still the same for the success of lecturers are lecturers' materials, which students expect to be able to understand clearly, as demonstrated in the studies of Gopal, Singh and Aggarwal (2021) and Adler et al. (2021). These studies have indicated that lecturers are expected to have sufficient communication skills and enthusiasm for teaching (Gopal, Singh and Aggarwal, 2021; Adler et al., 2021; Butler, Samuels and Peditto, 2021).

The ability of lecturers to deliver their material must also be supported by the ability to use the learning technology effectively (Lei and So, 2021; Paliwal and Singh, 2021; Carillo and Flores, 2020).

The various aspects presented as the results of these studies indicate that what is prominent among the things students want from lecturers concerns emotional and relationship factors, such as being approachable, caring, and empathetic, as described by Bell (2022). Meanwhile, prompt feedback, understanding the learners' needs, and available help are also characteristics of lecturers highlighted by Hettiarachchi et al. (2021). A study by Butler, Samuels and Peditto (2021) conducted in Canada also focused on two important things for student satisfaction in this pandemic era, namely the characteristics of being supportive and caring.

Because learning is no longer done in face-to-face interactions, lecturers increasingly play an essential role for students, with the findings of several studies indicating that students see aspects such as responsiveness, accessibility, and empathy as being more critical than lecturer competencies in providing the learning itself (Sitanggang, Luthan and Hamid, 2021; Darawong and Widayati, 2021). This demonstrates that, in online settings, the social presence of other parties, especially lecturers, is something that students value (Carrillo and Flores, 2020).

The factor of personalizing interactions and creating a comfortable space is an aspect that was previously not really important in face-to-face learning. This also applies to involvement outside class, which was previously not a concern of students, considering that classroom meetings have dominated interactions between lecturers and students, as discussed in a study conducted by Adler et al. (2021) in New Zealand.

A study by Kanwar and Sanjeeva (2022), conducted in India, emphasized that, in addition to teaching material provided by the lecturer, it is also expected that the lecturer will provide additional skills and knowledge to students, as well as guidance regarding their future careers. This can be conveyed through fun but still educational learning (Finlay, Tinnion and Simpson, 2022). Using a qualitative technique, Yeung and Yau (2022) found that students had difficulty following the lessons given in an online learning setting when lecturers were in a hurry to provide explanations without noting how the students responded and whether they understood or not.

3. Methodology

3.1 Social media posts

The data collection for this study was done by capturing posts on three social media platforms: Twitter, Facebook, and Instagram. The search was conducted using keywords such as "lectures in class", "likes about online class", "dislikes about online class", "pandemic and online class", and "online lecture experience". Social media posts created by active students in Indonesia were captured during the data collection and related to the implementation of online classes during the pandemic. This process took place over one month, in February 2021, by which time online classes had been implemented for approximately one year at various universities in Indonesia.

This data collection method is a reliable method used in qualitative research to provide a complete and comprehensive understanding of the conditions of students in the online learning environment (Kozinets, 2002). This study captures approximately 300 social media posts created by current students and related to their experience of online lectures. The profiles of the students, as the social media generators, are presented in Table 2.

Table 2: Profiles of some of the students as social media post generators

Account	Platform	Profile
@charxxxx	Twitter	Student from a top public university, follower 356, many retweets about things about the university
@Auslxxxx	Twitter	Student from top private universities, 432 followers, and many follow accounts discussing the condition of the university
@elfaxxxx	Instagram	Student from a public university, follower 973, Often posts with attributes related to the university
@insxxx	Instagram	Student from top private universities, with followers of 784, often post on Instagram, but only a few related to universities
HerlixxWaxx	Facebook	Student from a public university, follower 1527, Joined a group discussing the current state of the university

Account	Platform	Profile
@rennxxxx	Twitter	Student from a public university, the number of followers is less than 100, not very active on Twitter, the number of posts is small
@JIMxxx	Twitter	Student from private universities, with 282 followers, often comment on posts that talk about university
@nataxxx	Twitter	Student from top public universities have 443 followers, are less active on Twitter, and only occasionally post and participate in comments about universities
@Bentxxxx	Twitter	Student from top public universities, with 117 followers, participate in discussions about universities on Twitter.
@pierxxxx	Twitter	Student from one of the top public universities, have 200 followers, and only occasionally post related to the university.

3.2 In-depth interviews with current students

The results of the social media data capturing were categorized into several themes and then used as a guide to form questions for the in-depth interviews to elaborate on the findings. In-depth interviews were conducted with eight students from several private and public universities in Indonesia. The selected informants have the characteristics of being undergraduate students in Indonesia who have experienced face-to-face lectures before the pandemic and online lectures during the pandemic, and actively use social media. In-depth interviews were conducted by asking questions on themes regarding the lecturers' performance found from social media listening and digging further on other matters related to the students' likes and dislikes regarding the lecturers during the implementation of online learning during the pandemic.

Table 3: Profiles of the students participating in in-depth interviews

Initial	M/F	Major	University Year
LE	F	Management	Second
MRF	M	Chemical engineering	Second
IS	M	Industry engineering	Second
PA	F	Communication	Second
SA	F	Management	Third
YY	F	Nursing study	Third
ZA	M	Management	Fourth
DA	F	Psychology	Fourth

3.3 In-depth interviews with lecturers

To get a more comprehensive picture of lecturers' performance, the findings were further elaborated by conducting in-depth interviews with five lecturers. This was done to get the perspectives from lecturers on their efforts to provide online learning during the pandemic and to identify the factors that hindered their online teaching. A sample of interviewees was obtained through purposive sampling based on specific criteria; this method helped to obtain robust information (Malterud, Siersma and Guassora, 2016). The selected informants are senior lecturers with more than ten years of teaching experience, between the ages of 40 and 60. The informants came from both public and private universities; these were chosen to learn about variations in the online learning culture, if any. A study by Daumiller and Dresel (2020) found that there are differences among the learning cultures of different universities and faculties. In addition, these lecturers were chosen because they do not only teach, but also act as facilitators for students in the class. How to build different engagements will be illustrated through variations in the work experiences of the lecturers. The different ages will provide an overview of the challenges and obstacles of online learning, especially those related to technology literacy.

Table 4: Profiles of the lecturers participating in in-depth interviews

Initial	M/F	Description
RZ	F	Age of 50, teaching Human Resources Management at Business School, has extensive business experience
AS	M	Age of 55, teaching Digital Marketing at private university, acting general manager at the corporation.
ASA	F	Age of 40, teaching Brand management, at business school, active as an industry mentor
DT	F	Age of 48, teaching entrepreneurship at public university, active as a business coach
CE	F	Age of 45, teaching Fisheries Aquaculture at a public university and engaged with many fisheries' community

4. Results

The results indicate that most of the items taken from the Social-Task-Technology-Fit (STTF) framework remain the same; there are not many changes compared to the era before the pandemic. However, some aspects have new meanings that need to be revisited to capture the lecturers' performance in the new context. Three new themes emerged from the exploration study which have never been discussed in previous studies on LPIs for online teaching, especially in abnormal conditions such as a pandemic. The first theme concerns the variations in digital literacy of lecturers and the implications for lecturers' performance. The second theme is the dynamic ratio of social versus task activities, which implies the need to focus on academic (task-oriented) or non-academic (social) tasks. The third theme is the degree of controllability of each performance while having the same weight for LPIs.

4.1 Digital literacy variations

A lecturer's ability and capability to use technology helps him or her to perform teaching tasks better (Davies, 2011; Hettiarachchi et al., 2021). This was already realized before the pandemic, since also in face-to-face classes the use of modern and sophisticated technology assists the teaching and learning process. The main difference between face-to-face and online classes is that in face-to-face classes a lecturer still has other alternatives to compensate for his or her lack of understanding of technology. For example, a lecturer's breadth of insight, and the way he or she teaches and interacts with the students naturally, are all added values that absorb his or her shortcomings in the use of technology.

During the pandemic lockdown, when online teaching was the only alternative and digital literacy was a must, the situation was different. Students became more critical of a lecturer's ability to use technology. According to the students, without adequate mastery of technology, the work of lecturers in online classes will be ineffective and inefficient. Students sometimes have to wait a long time for the lecturer to solve a problem with the equipment, and then the day's session does not go smoothly. One student commented:

> *I used to be the happiest student in this lecturer's class. The discussion in class was engaging, with many examples of real-life cases. However, my favourite lecturer is currently spending more time on technical issues. Sometimes when he needs to share the screen, we have to wait for a long time. We feel that the acquisition of material is no longer effective.* (Interview, student, ZA)

Lecturers are also aware that their limitations in technology are obstacles to carrying out their duties as good facilitators in online classes during the pandemic. When asked whether they like teaching from home, in general, they agreed that they like it for time flexibility and not having to be stuck in traffic. However, they expressed their concerns about how they would provide interactive and good learning when meeting face-to-face. There are many who only use the standards for mastery of online meeting application technology such as Zoom meetings. At the same time, the students and management have high expectations of becoming more advanced in mastering technology.

> *It is challenging to liven up the class atmosphere, even though I was known as one of the favourite lecturers at the university. It seems now that creativity alone is not enough. One must have mastery of the latest teaching software. However, with so much work pressure, I do not have time to learn these technologies. This makes me anxious and I no longer enjoy teaching.* (Interview, lecturer, DT)

The aspect of digital literacy aspect was previously captured in LPIs in terms of competence (Douglas, Douglas and Barnes, 2006; Fielding, Dunleavy and Langan, 2010; Gibson, 2010); however, it is still mainly limited to competency skills using technology in general, not explicitly affecting teaching success. In online teaching, lecturers' greater digital literacy encourages intense interaction with students. A fun learning process is realized with the smooth use of learning technology.

The availability of online learning support tools that is not matched with the ability to operate them will be in vain. Lecturers themselves can control this aspect of digital literacy. The daily teaching activities carried out by lecturers should be a trigger to improve their digital literacy. When online teaching takes place, lecturers are expected to be able to operate the latest technology and applications; this ability must be continuously improved. Especially in the current era of information technology (IT), learning applications are constantly updated and changed.

> *When studying online like this, we who want to have the convenience must follow the development of online platforms. However, the same should apply to our lecturer. If the lecturer does not keep up with the development of new learning technology, the class will become boring.* (Interview, student, IS)

This study suggests that access to technology is a mandatory requirement that lecturers must meet when teaching online. In the current era of technology and communication, the availability of adequate teaching equipment is an essential aspect. This study provided evidence that most lecturers who have adequate teaching equipment tend to provide student satisfaction. This is also in line with the results obtained by Krumsvik (2014), Laurillard (2008), Rapanta et al. (2020), and Shehzadi et al. (2020), all of whom indicated that there is a positive correlation between student satisfaction and the use of learning support devices. Adequate teaching equipment for online learning includes laptops, cameras, leading internet connection providers, virtual whiteboards, microphones, props, and lighting assistance. With all of these tools, the online learning system is easy to use.

The importance of technological aspects for learning is in line with the student satisfaction survey component proposed by Bradford and Wyatt (2010), Long, Ibrahim and Kowang (2013), and Gee (2018), only the way in which to achieve this has changed. In face-to-face classes, student satisfaction can be achieved by using videos, teaching aids, impromptu quizzes, discussion groups, or asking the students for their direct participation (e.g., coming to the front of the class). Some things that can still be done in online settings to prevent boredom and overcome the issue of the students not being physically present are online quizzes, break-out group sessions, and playing exciting videos.

Lecturers can control the aspect of using learning support devices, because they can manage the access to these devices. In addition, universities, as service providers, can facilitate lecturers obtaining adequate learning support tools.

> *It is costly to be fully equipped, but my lecturer said he needs to do it. He bought and invested in an iPad with an e-pen during the pandemic, so he could write and elaborate on an online board when talking about challenging aspects, just like if we were in a typical onsite classroom.* (Interview, student, DA)

4.2 The dynamic of social versus task performance

In face-to-face classes, much of the discussion about performance relates to activities using the 'in-class' versus 'outside class' dichotomy. 'In-class' relates to academic activities, while 'outside class' relates more to non-academic activities, that is, social relationships. At a time when 'in-class' settings no longer dominate meetings between lecturers and students, but has been replaced by continuous interaction, the dichotomy needs to be revisited.

All explanations about student satisfaction are more directed to in-class learning. Before the pandemic, students talked about learning experiences when they met face-to-face on campus, especially in the classroom where they studied and met with lecturers. However, in this pandemic period, in-class learning is no longer the only opportunity for interaction with lecturers; in some cases, students even interact more via WhatsApp chat.

The social factors discussed in the STTF framework in the pre-pandemic period focused on non-academic interactions where relationship building with lecturers took place. Lecturers who were accessible and friendly outside the class were open to discussions with students when meeting them on campus and at events. However, this was more non-academic related. Interestingly, during the pandemic, outside class interaction is about relationship-related aspects and academic interactions. Classwork is continued outside the class, and this has become routine and part of the total experience.

In the task-oriented performance, commitment and motivation discussed in face-to-face learning are more about timely commitment, materials according to the curriculum, and motivation around teaching preparation and making the class successful (Xiao and Wilkins, 2015; Dachner and Saxton, 2014; Dziuban et al., 2015). When learning online, students must focus on listening to the lecturer, but the lecturer must also focus on the audience. This is because online learning time tends to be more flexible, thus providing an opportunity for anyone in the Zoom meeting to do other things at the same time.

The theme that emerged during the exploration study is the ratio between the types of activities, namely task-oriented activities and social-oriented activities, as part of the teaching-learning journey. Tasks versus social activities can be used to replace the in-class versus outside class dichotomy.

4.2.1 Social-related indicator: Communication

Social relations between lecturers and students must be built consistently. This is important because lecturers and students tend to interact less directly in online learning, only through virtual involvement. The lecturer needs to maintain this involvement so that the students feel comfortable. As proposed in this study, one way to modify lecturers' activities is through lecturers' efforts to continue communicating with their students outside the classroom, through WhatsApp groups. In this case, lecturers can also send invitations to students' social media accounts in order to increase the closeness virtually established with their students.

> *My lecturer was entertaining. He extended the class discussions after class by creating a WhatsApp group (WAG). Moreover, he answered all the questions on the WAG, and when contacted via email, the response was also swift.* (Interview, student, IS)

> *I am devastated. It's been two days since I sent a message on the WAG but there has been no reply, even though this is about our class group assignment. In the end, we worked with limited understanding.* (Interview, student, SA)

4.2.2 Social-related indicator: Empathy

Before the pandemic, the emotional attachment was already significant, but this study found that the intensity had even increased. Empathy is at an average level, but this empathy is of a more holistic nature. Some lecturers even helped think about how to deal with the problems of students who were far from their parents and later caught COVID-19. They extended their service to more than a facilitator in the classroom.

> *I noticed that students were not present for several meetings, and I asked their friends if there was a problem. When I heard that they had been exposed to the virus, we lecturers had to be ready to intervene. Teaching work requires more dedication.* (Interviews, lecturer, CE)

> *At the beginning of the online class, my lecturer said that there must be a two-way conversation, and lots of questions and answers because it's online. The WhatsApp group was specially created for extending the class discussion.* (@JIMxxx, on Twitter)

Introverted students feel more pressured by online meetings; when the lecturer calls on them to answer questions, they feel unable to explain the answers, because they feel all eyes are on them on the screen.

> *My introverted soul was immediately scared; then panic attacks started, even before class. From waking up until class started, my heart was pounding very loudly, I had cold shivers and excessive anxiety. (*Herlixx Waxx, on Facebook)

Empathy for students is when the lecturer realizes that with this online learning, everything must be considered from all angles. For example, lecturers should understand that students also get many assignments from other lecturers. Not understanding the student's holistic situation is included in one of their complaints:

> *My lecturer has never thought about our mental condition. It's been COVID, and there are lots of assignments, lots of mental burdens. I am almost burnt out. The lecturer put too much on our plates.* (Interview, student, LE)

The study results indicate that empathy is an intangible indicator in terms of students interacting with their lecturers, both in online classes and outside of classes, through discussions and communication on the internal campus website and WhatsApp groups. Therefore, as a good lecturer in the online environment, it is essential to find a way to read the non-verbal responses from students so that the created dialogue produces optimal output, as expected. It seems essential for lecturers to empathize with students. Empathy can be built by building communication through lecturer–student interactions. This sense of empathy supports the bond between lecturers and students (Douglas, Douglas and Barnes, 2006). Student satisfaction can be realized when lecturers build good relationships with students.

An aspect that is no less important is showing concern for students' difficulties when they are studying online from home. Meyers et al. (2019) realized the importance of the role of lecturers in maintaining the psychological wellbeing of students. This can have implications for a comfortable and enjoyable learning process. The lecturer's concern for students is essential in providing this psychological service. Students need psychological and emotional support from lecturers, particularly in the case of a pandemic where they are bored with the online learning routines.

4.2.3 Task-related indicators: Teacher commitment and motivation

The interview results indicate that lecturers often perform activities other than teaching activities during online learning. One respondent shared that his lecturer participated in other webinar activities that coincided with the teaching schedule of his class. The lecturer should stay focused on teaching by not performing other activities in parallel. This will encourage the creation of a conducive learning space during online learning. This is also supported by the findings of Student A's netnography on Twitter; according to him, lecturers carry out other activities besides teaching and other lecturers expressed the same opinion.

> *It seems that my lecturer is currently on a webinar elsewhere because the response is not instant, and the answer is unclear and not relevant. Key management should be aware of their lecturers' habits and that they run parallel sessions, because it ruins our learning.* (@Auslxxxx, on Twitter)

> *During this pandemic, as a lecturer, I am also confused about dividing my time, because sometimes external webinars or meetings coincide with the teaching schedule. Like it or not, they have to be parallel.* (Interview, lecturer, RZ)

This commitment aspect is controllable, because lecturers can manage their activities while prioritizing teaching. The respondents said that lecturers did not teach according to the lecture schedule during the online learning process, which should have been agreed upon at the beginning of the semester. During class schedules, lecturers only make announcements through the class WhatsApp group and ask students to study material through YouTube channels. This makes students dissatisfied, even though the material presented has been discussed a lot; it still requires two-way interaction between lecturers and students. As a result, students complain that they have to pay full tuition fees but do not get the full attention of the lecturer.

> *Here he is, he's coming for five minutes, then gives us the task to go to his YouTube channel, then he's gone. I'm disappointed that I can't discuss and gain insight from him today. This session is supposed to be synchronous.* (Interview, student, YY)

> *When I am needed elsewhere, my role is more important there, because it is an urgent matter in the corporation. Sometimes I ask students to open my material on my YouTube channel, and then I will evaluate their understanding by asking questions asynchronously.* (Interview, lecturer, AS)

4.2.4 Task-related indicators: Using creativity for engaging experiences

In this study, it was found that creating an engaging class is an essential aspect that students expect from an online environment. Students appreciate lecturers' efforts, as can be observed from the following excerpt:

> *One of my best lecturers is willing to explain concepts with interactive PPT slides. Besides that, he uses quizzes such as Kahoot or Quizizz. Then also, we study in groups in the break-out of the Zoom room, and he goes around to see which students have issues and need help.* (Interview, student, MRF)

4.2.5 Task-related indicators: Monitoring student attendance

Some interviewees admitted that they thought that online learning allowed them to perform other activities simultaneously. Of course, this is a problem, because these students do not focus on the provided material. They tend to do other things that are not relevant to learning (e.g. opening social media, surfing online, and doing homework). Therefore, the lecturer must continuously control the class through different means.

In blended learning, the terms 'synchronous meeting' (face-to-face or online) and 'asynchronous meeting' (not face-to-face) can be adjusted according to the parties' respective available times. Synchronous meetings are expected to be more frequent than asynchronous meetings, because too many asynchronous meetings will reduce interaction and likely decrease understanding. Attendance at asynchronous times can be ensured by carefully evaluating student assignments.

> *Sometimes I feel there is an opportunity to do non-class-related things because the lecturer doesn't care whether we are present or not. He was busy talking to himself while teaching via Zoom. This is not good; it made us lazy.* (Interview, student, SA)

This is an indicator for measuring lecturer obedience, which is no different from the face-to-face learning process. The lecturer's task is to verify students' attendance in class, as revealed previously (Baber, 2020; Young, Young and Cartwright, 2020; Zhan and Mei, 2013). During offline classes, lecturers ensure student attendance

through attendance and direct physical interaction. While online, lecturers need to ensure that all students install their audio and cameras properly to ensure attendance.

4.2.6 Task-oriented indicator: Being responsive and interactive

Students feel that it is essential that lecturers note their presence. During face-to-face lectures, students can ask the lecturer directly to get real-time answers. However, during online lectures, students must wait indefinitely for the lecturer to answer their questions. A student said that he expected quick feedback from the lecturer, similar to what he would expect in a face-to-face environment. Lecturers need to modify their methods to be more responsive and interactive in online classes. This is in line with the results obtained by Nasser-Abu Alhija (2017), Paladino (2008), and Su and Wood (2012), according to which responsive lecturers increase student satisfaction with lecturers when learning online.

An unpleasant experience was conveyed by a respondent who said that he had activated the raise-hand feature of the online meeting application during the online class, but that the lecturer had ignored it. This experience indicates that lecturers have not modified their way of dealing with students who want to participate. Lecturers are still guided by face-to-face teaching, where students raise hands which can be seen directly.

> *During the online class, I wanted to ask the lecturer, then activated the raise-hand feature, but it was ignored. I feel agitated*. (@charxxxx, on Twitter)

> *Sometimes there are lecturers who respond very fast, within a few minutes; however, there are also those who answer after a few hours or even some who only answer after I have been waiting for a few days, so it's useless.* (@Bentxxx, on Twitter)

4.2.7 Task-oriented indicators: Reducing external distractions and interruptions

In the case of face-to-face learning taking place in the classroom, both lecturers and students only focus on activities in the classroom. However, online learning, conducted at home, involves various unavoidable distractions and interruptions from the surrounding environment. These disturbances include the atmosphere and surrounding conditions that are not conducive and interfere with the lecturer's assignments or homework. This disrupts the process of delivering material and, as a result, students have difficulty understanding the material that has to be delivered. To avoid this issue, lecturers must arrange quiet rooms and educate the family to leave them alone during classes.

> *My lecturer teaches while taking care of the baby. Right from the beginning of the class, the baby was already crying. During class the baby also cried, until my lecturer finally turned off the camera and the sound. It's also hard to focus on listening to the explanation.* (@pierxxx, on Twitter)

4.3 Controllability factors

This study found one striking uncontrollable factor that affects teaching success: the network and the signal/clarity. Academically, this aspect is a novelty for this study and needs to be noted. This specific technology-related dimension is also critical, as it is not included in the current LPIs. To obtain more holistic and contextual LPIs, university managements should include this factor with caution, that is, not place too much emphasis on evaluating lecturers on things that are beyond their control.

> *At first, I thought the network would be smooth, but the lecturer's network was bad, so suddenly I didn't have the chance to participate in the quiz*. (@JIMxxx. On Twitter)

> *After waiting for two hours, there was no sound. It turned out that the lecturer's house was out of light!* (@nataxxx, on Twitter)

> *I feel that general things such as task orientation and managing student interaction can be controlled. However, what is worrying is that some things in running this class are beyond my control. And, if because of that, I am considered to perform poorly, that is not fair. I've been struggling to keep the sessions successful.* (Interview, lecturer, ASA)

The aim of the weighting between controllable and uncontrollable factors is so that lecturers will be alert to various factors that depend on their willingness. However, it is not the intention that they should be involved in excessive efforts to overcome problems that are beyond their control. The ability of lecturers to satisfy student needs in terms of controllable and uncontrollable factors depends on student–student interactions, student–lecturer interactions, teaching methods, and the organizational structure (Dary and Pickeral, 2013; Sulak, 2018).

As discussed by Bradford and Wyatt (2010), Vonderwell and Zachariah (2005), and Zahedi and Dehghan (2019), in the case of online learning, lecturers can only rely on the sound and images presented on digital screens. In this context, the network becomes a critical component to support learning for both students and lecturers. However, internet service providers with reputable networks remain limited. In addition, network and signal stability are highly vulnerable. Dependence on the use of networks and signals for online learning is inevitable. These two components are essential aspects that must be considered to conduct successful teaching sessions.

The performance quality of the service provider, which plays an important role, is beyond the lecturer's control, because he or she cannot directly control the network and signal stability during online teaching. Likewise, previous studies have discussed face-to-face learning, indicating that support from institutions significantly influences the success of a lecturer's teaching process (Rapanta et al., 2020).

During face-to-face learning, support is provided concerning access and licences for premium platforms, and there is the presence of technical department staff or IT staff to help lecturers identify and overcome the 'time-consuming problems' they face (Joshi, Vinay and Bhaskar, 2021). However, such support is not available during the online learning process. Networks and signals that play a significant role are beyond the control of both lecturers and universities. It is increasingly important to focus on this factor in an online learning environment amidst the automation and system uncertainty that can occur at any time and cannot be controlled by the user. One student related that she cancelled a quiz during class due to a network problem. This can cause delays in the effectiveness of the teaching and learning processes.

Table 5 summarizes the three themes that emerged from this research study and elaborates on the lecturer performance indicators that should be considered, especially to create a pleasant learning experience in an online learning environment.

Table 5: Emerging themes and weighted lecturer performance indicators

	Theme	Condition	Weighted LPIs
1	Digital literacy Variation	- Low	- Lecturer with a high level of digital literacy: technology-oriented performance indicators weigh higher than course content delivery indicators (task)
		- High	- Lecturer with a low level of digital literacy: technology-oriented performance indicators weigh lower than course content delivery indicators (task)
2	Social vs Task-related dynamic	- Social is more important than task	- Task is more important than social – in a pandemic: social factors should be given higher weight than task-oriented factors
		- Task is more important than social	- In normal conditions: social factors should be given a lower weight than task-oriented factors
3	Controllability	Controllable vs uncontrollable factors	Controllable factors should be given a higher weight than uncontrollable factors

5. Conclusions, implications and recommendations

This study enriches previous studies that discussed the same topic, namely the expectations of students in online classes during the COVID-19 period. Most previous studies have used a quantitative approach that failed to reveal fresh insights. By contrast, this study, using a qualitative approach, based on data obtained from social media and in-depth interviews with two essential stakeholders, namely students and lecturers, achieved a deeper understanding and validity through triangulation.

Based on the results and discussions, the researchers conclude that universities should stop using generic LPIs and redesign the LPIs contextually. It is suggested that a weighted system between performance variables be introduced, considering the three themes derived from this study: (1) the degree of digital literacy of the lecturer; (2) the dynamic expected ratio between task-based (academic) and social (non-academic) performance; and (3) the controllability of each aspect.

This study demonstrates that sudden situations such as this pandemic should not pressure lecturers who have shown strong dedication and high performance in teaching. One of the factors, namely the level of digital literacy of a lecturer, cannot be achieved instantly. Universities need to cluster groups of lecturers based on their level of digital literacy and give different weights to LPIs in technology-related performance aspects. Digital literacy, which varies from lecturer to lecturer, is homework for universities, and this depends on the extent to which a university is willing to invest in talent development. By categorizing lecturers according to their level of digital literacy, the issues that arise around this technology aspect can be handled contextually.

Important aspects that need to be considered in designing the contextual LPIs are the social versus task-related performance expectations based on the macro environment. A resourceful lecturer during the COVID-19 pandemic will give more attention to social or non-academic aspects than task or academic aspects. The reason is that students are not only in an online environment but also in an uncertain situation and experiencing health pressures. Social aspects, which were initially only limited to outside class activities aiming to maintain relationships, must be extended more widely during the pandemic. Empathy and paying attention to students are factors from the beginning until the course is finished, and serve as an ongoing service, not just an event. Overall attention, both academic and non-academic, is present in social factors, but not limited to outside class activities, but feature throughout the teaching-learning journey.

The same goes for controllability. The new LPIs design should give greater weight to aspects that the lecturer can control, and conversely, give less weight to aspects that the lecturer cannot control. Giving more weight to controllable aspects signals to the lecturer that what is under control should be done as well as possible. Lecturers need to be confident that their performance in carrying out teaching tasks is appropriately and fairly assessed. Something that happens with the network signal and internet-related problems should not reflect on them because this aspect is beyond their control.

The results of this study can be used for HEI management to design more contextual LPIs, tailored to what the lecturer can and cannot do and based on current student expectations. This will subsequently make it easier for lecturers to focus their efforts on creating quality teaching. Contextual LPIs can be used not only during a pandemic but also in other contexts, where it is necessary to first look at the boundaries of the assessment corridor and how controllable or uncontrollable an aspect is. By using a contextual evaluation, universities can get information about their lecturers' portfolios faster, and corrective action can be taken immediately. In addition, because the assessment is fairer, lecturers will not be anxious to face changes in the macro environment.

To maintain their performance, it is always preferable for lecturers to keep updating themselves with technology capability, to be prepared for any global environment changes. It is also recommended that universities keep lecturers informed about students' trends and current needs and how they can juggle between academic and non-academic task versus related social aspects in their interaction with students. Universities are urged to allocate resources to focus on human capital development, particularly for digital literacy competency.

The limitation of this study was the difficulty identifying students who write stories on social media, because not all of them use their real identities. Especially students who submit complaints tend to be careful about responding to further questions from researchers. Future research should look at the differences in the opinions of students from public versus private universities, considering that students at private universities are more demanding because the tuition paid is higher.

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