

# The Role Of Peer Assessment Model With A Web Platform In Participation And Learning Achievement Of Students

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## Abstract

Technological innovations have led to the widespread use of web-based peer evaluation as an alternative formative assessment strategy. This assessment method has significant potential benefits for the education of the student population (Chien, Hwang, & Jong, 2020). A web-based peer evaluation system and a method for team improvement were developed in order to allow the rapid administration of the assessment, stimulate the provision of quality feedback, and construct effective team operations (Friedrich, 2019). However, very few teachers really put into practice peer evaluations that are completely anonymous. When implementing web-based peer assessment systems, both students and instructors will have obligations. The teachers often have a considerable impact on the outcomes of the usual classroom assessments (Liu, Li, & Zhang, 2017). The finding of this study suggests that there is a wider gap between the evaluations that males and females have of themselves based on their own self-assessments and the evaluations that the lecturer has of them based on their own evaluations. One of the many possible explanations for this phenomenon is that individuals often have a more favourable perception of their own intellect than females. The aim of this article is to provide evidence on the role of the Peer Assessment Model with A Web Platform in participation and learning. A total of fifty reputable publications were searched out; however, only five were proved to have a high level of authenticity and relevancy with the topic.

**KEYWORDS:** Peer Assessment, Learning Achievements, Web platform, Peer Review Approaches, Cognitive Feedback.

## INTRODUCTION

The practice of evaluating students by their peers is prevalent in institutions. It increases student involvement and interaction and fosters critical thought and reflection. The benefits of peer assignment for developing ethical, analytical, and introspective professionals are undeniable. Moreover, (Liu & Li, 2014), accentuated that in recent years, it has been shown that peer evaluation is even more useful than instructor evaluation when anonymity is assured through the use of various learning tools provided by online learning platforms. As a consequence of this, assessment methods that are

oriented toward the student should increasingly incorporate peer assessments. Apart from that, (Mora et al., 2020), if the findings of the peer evaluation are very compatible with those of the lecturers themselves, then the lecturers may reap extra advantages from the process of peer assessment without having to expend any more work. According to (Chen, 2010), in order for students to completely internalize the competencies that are outlined in the various curricula, there would need to be a substantial increase in the amount of time that professors spend providing students with feedback on the activities that are presented throughout the teaching-learning process. (Pérez et al., 2020), stated that students in higher education, in particular, can benefit from anonymous peer assessment because it leads to more helpful feedback, a better understanding of the societal impact of one's own efforts, and a small but significant trend toward improved performance. Students in lower education can also benefit from anonymous peer assessment.

Students benefit more from receiving cognitive feedback (such as explicit correction) than they do from receiving emotional input (such as complimentary remarks) and meta-cognitive feedback (for instance, reflecting comments). (Ng & Yu, 2021), accentuated that students that are participating in a system of peer assessment are given a rubric to use in order to offer feedback on one another's efforts. In addition, (Jong et al., 2013), assessed that the usage of electronic rubrics may be used to facilitate the management of anonymity. By using the rubric, one might potentially increase their ability to appraise the quality of their own work as well as the work of others. Due to this, it is very necessary for the process of peer review to make use of mechanisms that protect individuals' anonymity in order to reduce the adverse effects on society. According to (Liu et al., 2017), if people are given greater anonymity, they would feel less pressure from their peers, have an enhanced sense of security and have a more positive outlook on the results of peer review. It is a time-consuming and hard endeavour to assign marks to group assignments in which some students contribute more than others; nevertheless, peer evaluation may assist ease this burden. (Lu & Law, 2012), clarified that learners might benefit from timely feedback and be exposed to other ideas, offering opposing viewpoints, since the process has been shown to stimulate critical thinking and introspection. Furthermore, learners may benefit from being exposed to different ideas, not only the ones provided by the teacher.

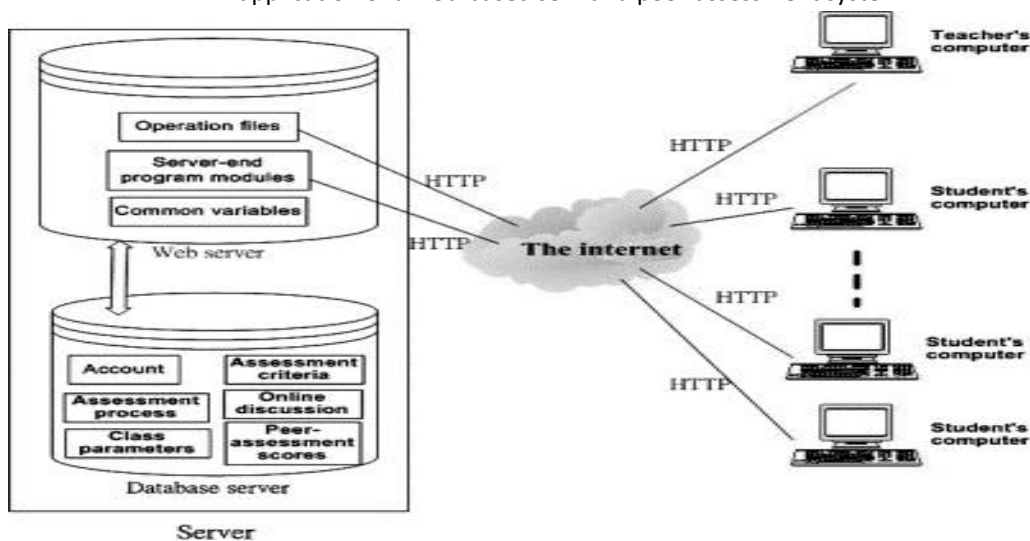
The web-based platform recognized as Blackboard makes it easier for instructors and students to communicate with one another and work together, and it also makes it simpler for students to share and organize their course materials (Friedrich, 2019). A peer-assessment forum was created in Blackboard's discussion boards so that students may provide feedback on one another's work and learn from their peers' perspectives. Students are forced to critically analyze the work of their peers and offer constructive criticism when evaluated by their peers. This is accomplished through the use of

peer evaluation (Er et al., 2021). Even if technological advancements have made significant efforts to improve the conventional approach to peer review, there is still room for additional development in this domain. For example, there is a need for more technical development in order to improve the overall quality of the comments made by students (Balasubramanian et al., 2014). Thus, the aim of this article is to provide evidence on the role of the Peer Assessment Model with A Web Platform in participation and learning.

## LITERATURE REVIEW

### Web-based Peer-assessment Platforms

WebPA is an established platform for student evaluation by their peers that tries to solve the problem of assigning individual grades to students working together in a class. It may be used for any kind of assignment, and the teacher has the ability to modify factors such as the number of teams, the size of the teams, and the grading criteria (Badea & Popescu, 2022). By including student feedback at a variety of stages throughout ongoing projects, the CaptainTeach approach provides an alternate and exciting alternative option. If a student has misunderstood a coding challenge, using this technique may be able to assist them in getting back on track in time to make the deadline owing to the feedback they got from their fellow students (Clarke et al., 2014). SocialX is a programmed exercise-sharing platform that includes a built-in reputation system. Its primary purpose is to encourage student participation and motivation. This framework exemplifies a number of the qualities that distinguish a successful learner, including initiative, altruism, the ability to collaborate well with others, subject-matter expertise, and the critical thinking skills necessary to assess the value of the methods used by others (Sterbini & Temperini, 2011). The figure below shows the design and application of a web-based self- and peer-assessment system.



**Figure 1.** The design and application of a web-based self- and peer-assessment system. Source: (Sung et al., 2005)

CrowdGrader employs a methodology that is conceptually similar to reputation, giving more weight to the marks that were submitted by students who had a high degree of grading accuracy. Each student is motivated to do their best work in order to get a high grade that reflects both the quality of the submissions and the quality of the job they did as a reviewer (Darvishi et al., 2021). It is indeed possible that, depending on the situation, consulting both peers and experts is the best course of action. For example, human TAs ensure that the reviews on the website Mechanical TA, which is entirely automated, are of high quality (Wright et al., 2015). The students who did not display reviewing proficiency are given a grade by the TAs, and the evaluations produced by students who did demonstrate reviewing ability are inspected at random.

### The Role of Instructors and Students

Students and teachers will have obligations while utilizing web-based peer evaluation systems. Frequently, instructors have a substantial effect on the results of routine classroom assessments (Hung & Chou, 2015). The teacher provides some direction, and the students work on a topic for a limited length of time under that guidance. As a direct consequence of this, students often only receive comments from their teachers. When participating in web-based peer evaluations, students, in addition to their more typical role as students, take on a portion of the responsibilities of teachers in the capacities of examiners and providers of feedback (Hagenauer et al., 2015). Students are required to exert more effort than they would in a circumstance that is more normal since the mechanism makes it possible for them to engage with one another and work together rather than just work alone (Reinholz, 2015). The fact that raters were also competitors, which may impair their neutrality on assessments, was something that some students found to be very frustrating about the process of peer evaluation (Carless & Boud, 2018). In addition, the use of web technology may broaden the opportunities available to students for connecting with their classmates beyond the constraints of time and location, given that activities may be carried out either inside or outside of the classroom. Figure 2 shows the self and peer-assessment process for students;



**Figure 2.** Peer and self-assessment for students. Source: Peer and Self-Assessment for Students, 2021 (Peer and self-assessment for students, 2021)

### WesPASS (web-based peer-assessment system)

PHP was used throughout the development of the system, while MySQL was used as the backend database. Teachers are able to make use of this platform in order to publicize assignments to their

students, and students, for their part, are able to email those assignments directly to their instructors, review both their own work and the work of their peers, as well as correct and grade their own assignments (Kortak, 2018). Inside the system, there are four different types of users: the global administrator, the school administrator, the teacher, and the student. Any and all system adjustments may be carried out at the discretion of the global administrator. The following responsibilities may be carried out by the global administrator with the help of an administration panel (Tennant et al., 2017). These responsibilities are in addition to those that can be carried out by the school administrator and the teacher. The global administrator has the ability to see and change the content shown on all of the system users' screens. A teacher may add new students to a class by clicking the button that says "Add new students." The teachers come up with a number of different activities for each class and then announce those (Lai & Hwang, 2015). The assignment creation page is where teachers enter the details of the tasks they are assigning to students, save those details, and then establish the grading scales that will be used for those assignments.

### **Web-based Peer review approaches**

Peer review is used in a wide number of academic fields, including computer science and social work, with the goal of improving student's writing skills in their own language. (Zou et al., 2017), determined that CS and SWoRD are two of these fields. The bulk of the assignments that are offered in these two forms put students' ability to apply their imagination, creativity, and critical thinking to the test in a very significant way. However, (Mutai, 2015), highlighted that when it comes to the efficiency of their writing, writers often have blind spots when doing duties of this kind, or the works themselves are confined by the imaginations of the authors who created them. It is a typical problem for students to struggle with writing since they do not comprehend their target audience; here is where peer review shines.

Moreover, (Adwan, 2016) analyzed that web-based peer assessments are increasingly being employed in a variety of fields and disciplines outside of statistics. In secondary school science classes, the Vee heuristic is an effective tool for developing inquiry-based educational programming. The Vee heuristic has a twin purpose: first, to provide light on the organization of knowledge, and second, to assist in the building of the heuristic itself. It focuses a strong emphasis on the organization of knowledge, both in a theoretical and methodological sense, as well as on the ways in which these two aspects interact with one another. Aside from that, (Hsu et al., 2020), emphasized that the primary focus of SPARK is to encourage cooperative work. Self and Peer Evaluation Resource Kit (SPARK) is a web-based tool that was intended to relieve some of the limitations that are associated with the use of paper-based approaches and to allow self and peer evaluation of collaboration with an infinite number of students. (Hwang & Chen, 2010) stated that the act of

evaluating one another's contributions to groups is known as peer assessment, and it is required of students at educational institutions like universities. CAP is also used at the university level, where the primary focus is on the prevention of plagiarism through the use of graders who are tasked with determining whether or not the work of their peers contains instances of plagiarism.

#### **Associated drawbacks**

The use of peer review conducted through the Internet might potentially have potential drawbacks and risks. Although the approach is prone to bias, it is possible to alleviate the problem by taking certain safeguards, such as ensuring that participants remain anonymous. According to (Badea & Popescu, 2019), calibration and training are both good answers to this problem, but some peers may have doubts about their own competence to judge the performance of their fellow classmates. Apart from that, (Salmela-Aro et al., 2017), highlighted that platforms for contemporary peer evaluation may be found online and include, amongst others, CrowdGrader, WebPA, CaptainTeach, SocialX, and Mechanical TA. The primary limitations of existing systems include problems with reliability, the absence of a readily observable to identify and inform rogue evaluations, limited support for the teacher, possibly unfair allotment of solutions to review sites, a lack of instruction for students as assessors, and limited assessments of peer assessment data and review quality. In addition, the bulk of the systems have either been constructed from the ground up specifically for a single discipline or have been designed to allow peer review in a specific area of study.

#### **METHODOLOGY**

A technique known as a Systematic Literature Review is used in this investigation as the methodological approach. The "Systematic Literature Review" will mostly rely on secondary sources like papers, journals, and articles. These sources will be referred to at various points over the whole of the assessment. There will be a search conducted using the databases of Elsevier, Science Direct, Research Gate, Emerald Insight, and Google Scholar for publications that explore the role of the Peer Assessment Model utilizing a Web Platform in the involvement and learning achievement of students. For the sake of this investigation, Boolean operators and keywords will both be used. In the critical analysis of the research topic that was conducted in this study, which acts as an illustration of this strategy, a number of different keywords were used. In this study, database searches were performed with the two Boolean operators that are most often used ("AND" and "OR"). Using Boolean operators, this research will organize and assess the data that has been collected from a variety of research and publications. With the assistance of the PRISMA framework, this investigation will access and make use of reliable online sources in addition to subject-specific database resources.

**Table 1.** PRISMA Framework

**Databases that were considered (Emerald Insight, Science hub, Google Scholar, Elsevier, Research gate) and after a comprehensive keyword search, 50 publications were chosen.**



**Publications that were published before 2008 are excluded.**

**Remaining articles (20)**

**Remaining articles (15)**



**Articles without relevance to the topic (10)**

**Remaining articles (5)**

In order to validate and authenticate the findings of this study, any data that was deemed irrelevant or untrustworthy was discarded. Fifty publications were examined in depth in order to have a better understanding of the topic that the study was focusing on. Only five papers that had a high degree of relevance to the topic of this particular research were selected for further investigation. The fact that all of these publications were retrieved from databases that are widely regarded as being the most trustworthy and authoritative in their respective fields helps to ensure that the legitimacy and validity of this research are not in doubt. All of the information was gathered in a legal and ethical manner from reputable sources. When the papers are being reviewed, factors such as their consistency, dependability, and likeness are taken into consideration. After reviewing the relevant literature, it was discovered that five publications were able to satisfy the requirements for dependability. As a consequence of this, the scope of this research encompasses a total of five relevant publications.

## ANALYSIS AND DISCUSSION

**Table 2.** Systematic Literature Analysis

Title	Author	Objective	Keywords	Methodology	Findings	Year
"Exploring the Development of Web-based Peer Assessment System"	"Yeh, S.P., Liu, T.C., Graf, S. and Wang, Y".	In order to have a discussion about the most current developments in the industry, the objective of this study is to investigate ten distinct online peer assessment	Peer assessment, critical thinking skills, application model, classroom environment, student feedback.	This study analyses the similarities and differences between ten web-based systems that promote peer reviews in academic and intellectual endeavours. These systems were chosen	This project demonstrates the design and execution of web-based peer assessment systems that may be used in a variety	2008

platforms and compile our findings. This paper contributes to providing an overview of web-based peer assessment, aids in understanding the current developments, and provides recommendations for new innovations in web-based peer assessment. This is accomplished by discussing the characteristics of the systems, their application model, the intended users, and the shifting role of teachers and students brought about by web-based peer assessment. Additionally, this paper contributes to providing an overview of web-based peer assessment.

because they facilitate these types of evaluations.

of academic contexts to evaluate the performance of students. This study was conducted with the intention of providing an overview of online peer assessment systems by comparing and evaluating the fundamental characteristics of those systems. Both students and teachers have been given new roles as active participants in the dialogue that is taking place concerning the end



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users and the requirements they have. Through the use of peer evaluation, students are challenged to provide constructive comments and conduct critical analyses of the work that their peers have produced. Even while technological advancements have made significant efforts in improving the conventional technique of peer evaluation, there are still a great many ways in which technology may be utilized to

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"The role of self and peer assessment in Higher Education"	"Iglesias Pérez, M. C., Vidal-Puga, J., & Pino Juste, M. R".	The purpose of this study is to investigate how self-assessments and peer-assessments conducted in digital classrooms compare to formative evaluations carried out by teachers.	Self-assignment; Higher Education; peer assignment; concordance analysis; continuous assignment	The practical experience was carried out in a first-year course at the University of Vigo in Spain called Introduction to Administrative Statistics. The course is part of the Public Direction and Management programme, and it makes use of a collaborative learning technology called Moodle 2.5, which enables students to self-assign and work with their classmates. The education for this course is delivered in a traditional classroom setting as well as online. Students who work in blended learning are judged using a combination of	enhance the effectiveness, success, and ease of the process. The purpose of this study is to investigate how students evaluate their own academic achievement in relation to that of their teachers and other students. We find that gender has a considerable influence, and there is only a small amount of agreement between the credentials of lecturers and their own self-evaluations. There is a greater disparity	2022
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				<p>their own self-assignments and the assignments of their peers.</p>	<p>between the self-assessments that men and women have of themselves and the evaluations that the lecturer has of them. There are a number of potential reasons for this, one of which is that guys have a higher view of their own intelligence. However, the professor and the student's other classmates are of the opinion that the final grades that were given to the students are adequate.</p>	
"Assessment training	"Liu, X., & Li, L".	Within the context of a	peer assessment;	In this study, there were 78	The findings	2014

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effects on student assessment skills and task performance in a technology-facilitated peer assessment”.	peer assessment environment that makes use of digital resources, the purpose of this study is to investigate how the introduction of a training module for assessment influences the assessment skills and task performance of students.	assessment training; training effects	participants who were undergraduate students. An evaluation training exercise was completed by the participants before they took part in any activities that included peer assessment. Throughout the whole of the programme, students were required to review learning concepts, debate grading criteria, assess example works, and compare their ratings to those of the teacher. As part of the data collection process, initial and final draughts of student projects, students' evaluations of example projects both before and after receiving training in assessment, and written comments made by students on the projects of their	suggest that whether or not web-based peer assessment is effective in facilitating student learning is heavily dependent on the instructor's choice of how to structure the peer-assessment task and the extent to which the instructor provides training to scaffold students in assessment skills. Peer assessment is a method in which students evaluate each other's performance on a given task. Students who have
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it is hypothesized that training has an impact on the revisions; however, this is not tested. It will need more study to determine whether or not assessment training has an effect, and if it does, how that training could have an effect, on the quality of feedback that students provide to their peers and the types of modifications they make in response to peer feedback. Following the implementation of assessment training, the data analyses

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demonstrate that there was a considerable narrowing of the difference between the evaluations of sample projects made by students and those made by teachers. In addition, the degree to which students and teachers disagreed was a strong predictor of the quality of feedback that students offered to their peers and the efficacy of adjustments that students made to their own projects after obtaining peer

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"Does peer assessment promote student learning? A meta-analysis"	"Li, H., Xiong, Y., Hunter, C. V., Guo, X., & Tywoniw, R."	The purpose of this study is to investigate how student learning may benefit from peer review.	Peer assessment, learning effect, student learning, meta-analysis.	For the purpose of this meta-analysis, a total of 134 effect sizes were compiled from 58 different studies. Students who participate in peer review tend to have a higher standard deviation unit than that of their peers	input. This was found to be the case in both quantitative and qualitative research when there were smaller rating disparities, both the quality of the peer comments that were offered during the assessment and the number of changes made to the original projects after the evaluation increased.	To summarize, there is a large amount of theoretical support for the practise of using peer review to promote student learning. There is a dearth of	2020
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who do not participate in peer evaluation. In addition to that, a meta-regression research was conducted in order to investigate which parts of the peer assessment impact are most amenable to alteration.

consistent and high-quality empirical evidence on the influence that peer assessment has on learning as well as the factors that might change that impact. Despite the fact that peer evaluation is extensively employed, it has a great deal of potential. According to the findings of our meta-analysis, the educational results of students see a considerable improvement when they are evaluated by their classmates. In

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					<p>addition, the extent of the influence that may be generated by peer review grows when raters are provided with training and when the evaluation is carried out digitally rather than physically. Other aspects (such as the structure of ratings, the rationale for assigning ratings, and the regularity with which peers provide feedback) also have a significant impact.</p>	
"A web-based peer-assessment approach to	"Hsia, L. H., Huang, I., &	In this research, a web-based peer	Web-based streaming video, self-efficacy and	A peer-assessment system was developed and	The outcomes of the experimen	2016

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improving junior high school student's performance, self-efficacy and motivation in performing arts courses"	Hwang, G. J."	evaluation method for performing arts activities is suggested.	motivation, art course, learning approach, performance scoring rubrics.	implemented in a junior high school performing arts class in order to evaluate the practicability of the technique that had been provided. There were a total of 163 middle school students, and they were divided between the experimental and control groups in an equal manner. Students in the experimental group were instructed via the use of a web-based peer assessment setting, whereas students in the control group were instructed through the use of a web-based streaming video-supported environment.	t indicated that the web-based peer assessment technique was much more effective in improving students' performance, sense of self-efficacy, and motivation in the performing arts course than the web-based streaming video-supported learning approach. Furthermore, it was discovered that performance ratings were significantly related to students' self-efficacy in evaluating the work of their peers and
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improving their own work based on the comments of their peers, in addition to students' intrinsic motivation, which demonstrates the efficacy of performance scoring rubrics and the peer assessment approach. According to the results of a satisfaction questionnaire, students who were instructed through the use of a method that relied on peer evaluation reported significantly higher levels of contentment with the

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### DISCUSSION

The above analysis indicates that it is possible to effectively engage in learning activities, including activities involving peer review, through the Internet. This has been made possible by the proliferation of computer and communication technologies. It has been shown that student learning may be improved by the use of peer review. For instance, when students publish their knowledge and artwork on the web, they have the opportunity to immediately contribute and get comments from other students. In a similar manner, (Panadero et al., 2016), affirmed that students might be better able to think creatively and come up with original ideas if they are given the opportunity to reflect on their own performance and make adjustments in advance of being evaluated by their peers. If it is intended to engage in profound thinking, it is vital to put them in reflective conditions while also providing them with proper guidance and support. Moreover, (Morris et al., 2015), determined that teachers conducting a peer assessment activity should collaborate with students to develop a scoring rubric that outlines how points will be given for different outputs and performances of the learning activity. Students may have experienced an increase in their level of intrinsic motivation as a result of participating in a web-based peer review activity. In this activity, students took on many roles, including those of the audience, the authors, and the performers.

Moreover, the above findings show that the level of influence that peer evaluations have is significantly increased when raters are provided with education and evaluations are carried out digitally rather than on paper. According to (Panadero & Brown, 2017), when developing and carrying out a peer evaluation in a class, the instructor is required to take a number of considerations into mind. Programmers developed a web-based peer evaluation system in order to facilitate the process of reviewing the work completed by one's colleagues in the area of computer science. Moreover, (Yu & Sung, 2015), clarified that when it comes to peer-assessment programmes, proper implementation and management of the programme are very necessary to get the intended results. When the

number of students enrolled in a class increases, the learning outcomes and overall level of student satisfaction may change in a variety of ways depending on the instructional approach that is used and the amount of individual attention that is required. As a consequence of this, (Schunn et al., 2016) identified that there might be a need for methods of student assessment and counselling that are more efficient. In this kind of environment, it could make sense to utilize a method that relies on automated peer review and monitoring. This system would be perfect if it included features that made it easier for students to communicate with one another and provided fast feedback on work that had been performed. In a rush to improve the standard of education through the use of new technologies, a considerable number of web-based peer assessment systems were rapidly developed as a workaround for the inefficiencies inherent in conventional instructional practices.

### **CONCLUSION**

Students are more inclined to be constructively critical of one another's work when there is no face-to-face presentation, and they are communicating over the Internet, which provides anonymity. Through the use of online peer assessment, teachers are able to monitor their student's progress throughout the whole evaluation process. When doing a normal peer evaluation that consists of numerous rounds, it is very difficult for instructors to determine how well an assessor or assessee is doing in their respective roles. As a substitute for traditional methods of formative evaluation, online peer evaluation is rapidly gaining popularity as a result of recent developments in technology. It would seem that there are significant educational benefits to using this assessment technique. A web-based peer evaluation system and a method for team improvement were developed in order to facilitate the quick administration of the assessment, encourage the supply of quality comments, and design efficient team operations. Additionally, these systems were developed in order to design efficient team operations. Students benefit less from emotional input (such as praises) and meta-cognitive feedback (which refers to general observations) than they do from cognitive feedback (which refers to specific criticism for instance, reflecting comments). A rubric will be offered to each student who participates in a system of peer assessment so that they may use it while delivering feedback to their classmates. In addition, the use of electronic rubrics may make addressing the need for anonymity a lot less difficult. The usage of the rubric has the potential to improve both an individual's ability to assess the quality of their own work as well as that of others.

The findings suggest that assesses save time and money by not having to replicate assignments for their peer assessors when they use a web-based peer assessment system. This eliminates a time-consuming and costly step in the assessment process. The fact that reviewer assignment is often carried out in a random fashion presents a challenge for the currently used methods of peer

assessment. Increase the uniformity of the review process and the education of the reviewers, as well as the implementation of automated methods for identifying and reporting questionable evaluations. One solution to this issue is to implement a method of calibration as the preliminary phase of the peer review procedure. At this point, student ratings are compared to those of subject matter experts. It has been determined that an ideal system for peer evaluation should include the a few characteristics. Likely, support for a highly configurable peer assessment workflow, automatic reviewer allocation based on a variety of fairness criteria, a reputation system for addressing reliability issues, an automatic score-commutating mechanism to reduce the amount of work required for grading, an algorithm for identifying ambiguous peer reviews, and a calliper system for determining whether or not a review is a good reflection of the work being evaluated. It is possible that one of the primary goals of future studies will be to find ways to improve the validity and reliability of online peer reviews. In further research, this issue may also be examined since it presents the problem of assisting students in providing constructive comments throughout the process of peer evaluation. This may be achieved from a pedagogical aspect by training students in the appropriate procedures for assessing the work of their peers. One of the alternatives is to make use of an agent-based environment, which identifies problems that students are having when evaluating the work of their classmates and then provides the student with corrective measures, including links to relevant resources or examples of evaluations that have been completed in the past.

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