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ORIGINAL ARTICLE



THE EFFICACY OF THE ONLINE EDUCATIONAL COMMUNITY

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ABSTRACT

This study is intended to determine the efficacy of the teachers and students involving social, cognitive, and teaching presences to the Senior High School students of Saint Joseph College. This study utilized the descriptive survey design. Calderon (2006), defined descriptive research as a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships and then making an adequate and accurate interpretation of such data with or without or sometimes minimal aid of statistical methods. The following major findings are: the status of the implementation of the online educational community is at a wellimplemented level as rated by the students and the teachers. There is no significant difference between the rating of the teachers and the students on the status of the implementation of the online educational community. It can be concluded that the implementation of the online educational community could not be indicative of the performance of the students. Since there is no significant relationship between the implementation of utilizing online education, online learning can still continue as a learning modality whether there is an ongoing pandemic or not because there might be other factors that affect the performance of the students. The mode of the teaching-learning process could not affect the performance of the students.

Keywords: Efficacy, Online Education, Educational Community, Distance Learning, High School

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INTRODUCTION

Online education is a form of education where students use their home computers through the internet; some make use of cell phones and tablets as tools in online learning. The internet has made online learning possible, and many researchers and educators are interested in online learning to enhance and improve student-learning outcomes while combating the reduction in resources, particularly in higher education (Pape, 2010). Much more than just a new twist on distance learning, online schooling is changing the face of traditional classrooms and making education more accessible than ever before. In addition, an online educational community composed of teachers and students makes education possible with the internet and technology.

Online learning gives educators an opportunity to reach students who may not be able to enroll in a traditional classroom course and supports students who need to work on their own schedule and at their own pace. In recent years, technologies have made significant changes in all aspects of our lives



ranging from the global economy, and personal and professional networks to sources of information, news, and learning.

In online education, learning is synchronous and asynchronous, or a combination of both. Asynchronous learning is teaching and learning that do not happen at the same time (Moore & Kearsley, 2011). On the other hand, synchronous learning refers to teaching and learning that happen at the same time. In the new normal both learning process are conducted with the aid of technologies such as the internet. To provide a mental schema for thinking about learning and teaching in this context, Garrison, Anderson, and Archer (2000) proposed the community of learning model. This model postulated that deep and meaningful learning results when there are sufficient levels of three component present.

The three critical roles perform in the process of creating an effective teaching presence. The first of this role is the design and organization of the learning experience that takes before the establishment of the learning community and during its operation. Another teaching role involves devising and implementing activities to encourage discourse between and among students, between and the student, and between individual students and groups of students and content resources. Lastly, the teaching role goes beyond that of moderating the learning experiences when the teacher adds subject matter expertise through a variety of forms of direct instruction (Anderson, et.al 2011)

The creation of teaching experience is not always the sole task of the formal teacher. In many circumstances, especially when teaching tertiary level, teaching presence is assumed by students as they contribute their own skills and knowledge to the developing learning community.

The online method of education can be a highly effective alternative method of education for students who are willing, self-disciplined, mature and motivated, well-organized, and have a great degree of time management skills otherwise it is a disadvantageous learning environment for more independent learners, slow internet connection and has difficulty in assuming responsibilities required by the online class.

Online education has several pros and cons. Some of the pros include less traveling or commuting to school for the students, learning at their own pace and convenience, and the continuation of working their part-time jobs while taking classes. However, the cons of online education are the limited opportunities to interact face-to-face with professors and other students, which would result in difficulty in developing relationships with classmates because most of the interaction is through chat, messenger, email, zoom or google meet but no offline get-togethers. Additionally, students and teachers are required to learn new or enhanced computer skills; it requires a strong internet connection and the additional cost of high-speed internet. Teachers do not offer prompt and immediate feedback you get in a face-to-face classroom setting, while performance can be assessed on the spot in a classroom with distance education. Moreover, learners have to wait for the teacher's feedback while their work is being reviewed.

There are many reasons why there is so much discussion around online learning one reason is its benefits and uses, some are its effectiveness in educating students, its cost-effectiveness to combat the rising cost of postsecondary education, and the possibility of providing a world-class education to anyone with the broadband connection (Koller & Ng, 2014). Evaluating the efficacy of the online community is important because our country has been utilizing online learning for two years and we have to know if the teachers are really doing there in educating the learners through online

In the Philippines, even before the pandemic online learning has been utilized by some top universities in the country. The provision of courses and certificates online is nothing new but with the current situation, the education system in the country including the teachers and learners has been forced to reckon with online learning. Even top universities in the Philippines are struggling to find ways to offer online courses and distance learning options to students. Teachers are putting extra effort into these trying times so that the students are not deprived of proper learning while face-to-face classes are still not available. Moreover, students are also making efforts in finding places with fast internet connections so that they will not be left behind with the lessons. In this situation, is the online educational community effective? Do the teachers meet the standards of online teaching? Are students ready for a full online education program?

Research Questions

- 1. What is the status of the implementation of the online community as perceived by teachers and students?
- 2. Is there a significant difference on the assessment of the implementation of an online community between teachers and students?
- 3. What is the profile of the performance of the students?
- 4. Is there a significant relationship between the implementation of an Online Educational Community and the profile of the students using the identified indicators?
- 5. What are the struggles of the learners and teachers in Online communities?
- 6. What output can be proposed on the results of the study?

REVIEW OF RELATED LITERATURE

On The Status of the Implementation of Online Community

Technological advancement indubitably helped improve the speed and accessibility of distance learning courses; now students worldwide could attend classes from the comfort of their own homes. The implementation of the online community, which is composed of teachers and students, is significant as a new way of delivering lessons to learners.

According to Anderson, et. al. (2000), learning and teaching in an online environment are, in many ways, much like teaching and learning in any other formal educational context: learners' needs are assessed; content is negotiated or prescribed; learning activities are orchestrated, and learning is assessed. However, the pervasive effect of the online medium creates a unique environment for teaching and learning. The most compelling feature of this context is the capacity for shifting the time and place of educational interaction. Next comes the ability to support content encapsulated in many formats, including multimedia, video, and text, which gives access to learning content that exploits all media attributes. Third, the capacity of the internet to access huge repositories of content on every conceivable subject—including content created by the teacher and fellow students—creates learning and study resources previously available only in the largest research libraries, but now accessible in every home and workplace. Furthermore, the capacity to support human and machine interaction in a variety of formats in both asynchronous and synchronous modalities creates a communications-rich learning context. To provide a mental schema for thinking about learning and teaching in this context (Anderson, et.al, 2000) developed a conceptual model of online learning that they referred to as a community of learning model. The postulates that deep and meaningful learning results when there are sufficient levels of three component presences.

According to McPeak (1990) and Garrison (1991), The first is a sufficient degree of cognitive presence, such that serious learning can take place in an environment that supports the development and growth of critical thinking skills. Cognitive presence is grounded in and defined by the study of a particular content; thus, it works within the epistemological, cultural, and social expression of the content in an approach that supports the development of critical thinking skills

The second, social presence, relates to the establishment of a supportive environment such that students feel the necessary degree of comfort and safety to express their ideas in a collaborative context. The absence of social presence leads to an inability to express disagreements, share viewpoints, explore differences, and accept support and confirmation from peers and teachers.

In formal education, as opposed to informal learning opportunities, teaching presence is critical for a variety of reasons discussed in this chapter. In a work on teaching presence, Anderson, et.al, (2001) delineated three critical roles that a teacher performs in the process of creating an effective teaching presence. The first of these roles is the design and organization of the learning experience that takes place both before the establishment of the learning community and during its operation. Second, teaching involves devising and implementing activities to encourage discourse between and among students, between the teacher and the student, and between individual students and groups of students and content resources (Anderson, 2002). Third, the teaching role goes beyond that of moderating the learning experiences when the teacher adds subject matter expertise through a variety of forms of direct instruction.

The creation of teaching presence is not always the sole task of the formal teacher. In many contexts, especially when teaching at the senior university level, teaching presence is delegated to or assumed by students as they contribute their own skills and knowledge to the developing learning



community. Thus, designing and organizing the online learning context must be planned appropriately for better implementation. In any setting, the role of the teacher has a huge impact to the students' performance whether it will be face-to-face or online though the former is more challenging on the part of the teachers.

On the Performance of the Students

The performance of the students in the online setting is quite different compared to a classroom setup wherein there would be face-to-face interaction. Online learning advocates maintain that experience with online learning will be advantageous to students in an economy that rewards digital competency (Sheehy, 2012). Moreover, online course-taking may reduce disparities in the quality of teaching across schools, as teachers are not tied to specific schools, and it may allow for pedagogical innovations. Despite this steady growth in K–12 virtual course taking, we know little about how these courses affect student achievement (Bakia, et. al., 2013). On the one hand, proponents of virtual education point to several ways that virtual education could provide higher-quality education for students as compared with traditional classroom settings. For instance, virtual classes may allow students to work at a more individualized pace. This individualized pacing may help slower learners by allowing them to repeat confusing material until they master it, and it can help faster learners by allowing them to move on when they master the material, without requiring them to sit through repetitious explanations (Tallent-Runnels et al., 2006).

Virtual courses may also be well suited to provide immediate feedback on student performance to both students and teachers through intelligent tutoring systems, and they may provide for a uniquely interactive experience between students and the texts that they access (Bakia, et.al., 2014). For instance, if students are able to click on links within lessons that provide them additional detail on a subject of interest, that will allow them to explore their interests interactively. Moreover, online courses allow students access to coursework, and potentially to high-quality teaching, that they may lack in their local school. Conversely, it has been found that online learning during the pandemic hurt student learning, but did not hurt particular demographic groups more than others. However, they did find that if the instructor used active learning techniques, students were more engaged, and thus learning outcomes improved (Mckee, Orlov, 2021.

RESEARCH METHODOLOGY

Research Design

This study will utilize the descriptive survey design. The undertaking is descriptive since it will describe the status of the implementation of the Online Learning Community and the performance of the learners. In addition, it will seek to identify the effectiveness of the online educational community involving three presences: social, cognitive, and teaching presences in the teaching-learning process.

Research Respondents

The respondents of the study are Senior High School students and teachers purposively chosen through convenience sampling. The respondents are chosen based on the criterion that they utilize online education as a mode of learning.

Research Instrument

This study aimed to gather primary data, which was collected using a designed survey questionnaire with three parts.

The first part is a 33-item test that tackled the efficacy of the online educational community and was adapted and modified from the Col Survey by Garrison, Anderson, and Archer (2000).

The second part of the questionnaires is about determining the performance of the students during online classes for which the quality of class interaction, student attendance in online classes, and their scores in quarterly assessments were gathered. The teachers handling the respondents were requested to rate them. The scores in the quarterly assessment were retrieved from the class records of the teachers.

The third part is an open-ended question, which asked the respondents to cite struggles met by the learners and teachers in online classes and propose outputs in the results of the study.



Data Analysis

The data was collected through the survey questionnaires were organized and statistically treated with the utilization of the following statistical tools:

Average Weighted Mean to analyze the determine the effectiveness of online education.

Pearson's r was used to establish relationship between the implementation of online educational community and student's performance.

Frequency count was used to present the challenges encountered by the students during online classes.

RESEARCH FINDINGS AND DISCUSSION

The Status of the Implementation of the Online Community

The status of the implementation of the Online Community was rated by both teachers and students using a 5-point Likert scale composed of thirty-three (33) questions categorized into three (3) key areas, social presence, cognitive presence, and teaching presence. The result is shown in tables 1 and 2.

Table 1. Average Weighted Mean of the Status of the Implementation of the Online Educational Community as Perceived by the Students

| Indicators of Implementation | Average Weighted Mean | Standard Deviation | Description |
|---------------------------------|--------------------------|-----------------------|------------------|
| Social Presence | 3.46 | 0.575 | Implemented |
| Cognitive | 3.86 | 0.576 | Well-implemented |
| Presence | | | |
| Teaching Presence | 3.93 | 0.656 | Well-implemented |
| Overall | 3.75 | 0.543 | Well- |
| Implementation | | | implemented |

Legend: n= 55; 1.00 - 1.49 -Not Implemented, 1.50 - 2.49 -Partially Implemented, 2.50 - 3.49 Implemented, 3.50 - 4.49 - Well-Implemented, 4.50 - 5.00 - Very Well-Implemented

The figures in Table 1 show that the implementation of the online educational community has an overall rating of well-implemented as rated by the students. The standard deviation also suggests that the students have almost the same rating for the implementation of the online educational community. Furthermore, the data shows that of the three key areas being evaluated, social presence has the lowest rating which was rated as implemented while the others, cognitive presence, and teaching presence, had been rated at well-implemented status. These results suggest that the students are aware of the need to interaction with their classmates and teachers and that they find their current online interaction as not sufficient enough for their social needs. On the other, the students perceived that their cognitive development could still be enhanced through the online educational community. In addition, the teaching presence of the teachers with their organization, presentation, facilitation, and delivery of lessons through online teaching is instrumental to their cognitive presence.

These results are similar to the findings of Conrad and Donaldson (2012) who stressed that faculty can purposefully create social areas in their online spaces to encourage community building within the course or program. To help diminish feelings of disconnectedness and isolation among online participants, they suggested integrating social activities to establish connections and relationships before adding academic content to the course. Moreover, instructors should offer early continuous feedback for students on their academic performance, perhaps beginning with a diagnostic in the first week. This early, often formative feedback helps students quickly understand their progress. In fact, researchers suggest that the earlier the feedback is provided, the more successful the learning experience will be for everyone involved. Furthermore, organizations should purposefully design automated mechanisms that let faculty maximize personalization without absorbing too much time.

The next table shows the results of the teacher's rating of the implementation of the online educational community.

Table 2. Average Weighted Mean of the Status of the Implementation of the Online Educational Community as Perceived by the Teachers

| | • | • | |
|--------------------|---------------|-----------|------------------|
| Indicators of | Average | Standard | Description |
| Implementation | Weighted Mean | Deviation | |
| Social Presence | 3.84 | 0.574 | Well-implemented |
| Cognitive Presence | 3.95 | 0.524 | Well-implemented |
| Teaching Presence | 4.04 | 0.575 | Well-implemented |
| Overall | 3.82 | 0.503 | Well-implemented |
| Implementation | | | - |

Legend: n= 44; 1.00 – 1.49 - Not Implemented, 1.50 – 2.49 - Partially Implemented, 2.50 – 3.49 - Implemented, 3.50 – 4.49 - Well-Implemented, 4.50 – 5.00 - Very Well-Implemented

Table 2 reveals that the teachers had rated the implementation of the online educational community at the well-implemented level. The standard deviation also suggests that the respondents have ratings close to each other's ratings. Moreover, they rated all three (3) key areas evaluated at the well-implemented level, and among the key areas, teaching presence has the highest rating and social presence has the lowest rating. This indicates that the teachers like their students recognized the efforts of the teachers in implementing the online educational community and that they have done their responsibilities on the matter. Likewise, the teachers are aware that the interaction between them and their students has been insufficient to develop collaboration or group cohesion, affective expression, and open communication.

These findings are in consonance with the study of Wickersham and Dooley (2006), who established that the students may, in fact, have a hard time connecting with their peers due to low social interdependence, process losses, and social loafing caused by the volume of submissions (Lowry et al., 2006). Given the only and most prevalent social interaction opportunity is discussions for many online courses, examining conditions to increase their ability to support students socially and emotionally carries importance. Their results suggest that by manipulating group size, students' perceptions of cohesion, and sociability were positively increased in asynchronous class discussions.

In addition, social presence, and the degree of awareness of others in interaction is an important aspects of online learning. Social presence also promotes comfort and emotional connections among learners in online learning environments (Aragon, 2003). In other words, some online learning spaces afford more social interactions, and therefore, are more sociable. In this regard, sociability can be defined as the degree an online learning environment can support the creation of an effective social space where learners trust each other and feel connected with the group. This implies that teachers need to double their efforts and increase their sensibility in the online educational community so that learners won't have a hard time adjusting to their peers with whom they can only communicate and interact online. Giving appropriate assessment and evaluation that could also improve the learners' performance and their connection with their peers or classmates.

The Comparison of the Implementation of the Online Community between Teachers and Students

The evaluation of the teachers and students on the implementation of the online educational community was compared. The significant mean difference in the ratings was treated using a t-test. Table 3 projects the outcome of the analysis.



Table 3. Mean Difference on the Ratings based on Perception of the Teachers and Students on the Implementation of the Online Educational Community

| Indicators of Implementation | Mean Difference | t-test* | p-value | Remarks | Decision |
|---------------------------------|--------------------|---------|---------|--------------------|------------------------|
| Social Presence | 0.02 | 0.177 | .860 | Not Significant | Failed to reject H₀ |
| Cognitive Presence | 0.09 | 0.793 | .430 | Not Significant | Failed to reject H₀ |
| Teaching Presence | 0.10 | 0.801 | 0.425 | Not Significant | Failed to reject H₀ |
| Overall Implementation | 0.07 | 0.657 | 0.513 | Not Significant | Failed to reject H₀ |

Legend: *level of significance (α) = 0.05; degrees of freedom (df) = 93

The data reveals that the ratings the teachers and the students made based on perception are not significantly different. The similarity of their ratings in all key areas evaluated and in the overall rating could be observed. In addition, the t-test results reveal that the differences are not significant. The failure of rejecting the null hypothesis stipulated in the table above implies that both teachers and students have they have the same views and perceptions in evaluating the implementation of the online educational community. Also, all the respondents perceived that the implementation of the online educational community is well-implemented yet improvements on its implementation may be done. Despite the conveniences of online distance learning, challenges also are encountered by students and teachers. Distance education provides students with much more freedom in how and when they interact; however, Sun & Rueda (2012) argued that their ability to regulate learning becomes critical. Amadora (2020) also pointed out that with the lack of interaction during online classes, students tend to get distracted easily by smartphones, pets, deliveries, and many others rather than the ongoing online class. Since face-to-face interaction is absent, it is theorized that students will experience a lack of interest in online classes.

The Profile of the Performance of the Students

The performance of the students was gauged based on the student's interaction during online classes, attendance, and scores in their quarterly assessments. Table 4 shows the summary profile.

Table 4. Mean Percentage Scores of the Performance of the Students

| Indicators | Percentage Scores | Standard Deviation | Description |
|---|----------------------|-----------------------|-------------|
| Quality of Class Interactions | 72 | 0.825 | Very Good |
| Attendance of the Students in Online Class | 63 | 14.858 | Very Good |
| Scores in Quarterly Assessment | 84 | 13.54 | Excellent |

Legend: 0.00 - 20.00 - Poor, 20.01 - 40.00 - Fair, 40.01 - 60.00 - Good, 60.01 - 80.00 - Very Good, 80.01 - 100.00 - Excellent



The figures reveal that the students have a very good class interaction and attendance during their online classes as rated by the teachers. Additionally, the standard deviation reveals that the students have slightly varied qualities in the way they interact in their respective online classes. The average daily attendance of students attending the class is about two-thirds of the total population. This implies that students are eager to attend class to learn. Likewise, the data indicates that online classes can help the continuity of the teaching-learning process. The figures in the table also reveal that students have excellent scores in the quarterly assessment. This implies despite the struggles the students' faced in the online class they still manage to have high scores. While most studies revealed that technology use and competency were the most common challenges that students face during online classes (Rasheed et al., 2020), the case is a bit different in developing countries in times of pandemic. As the findings have shown, the learning environment is the greatest challenge that students needed to hurdle, particularly distractions at home (e.g., noise) and limitations in learning space and facilities. The online learning challenges during the pandemic somehow vary from the typical challenges that students experience in a pre-pandemic online learning environment. One possible explanation for this result is that restrictions in mobility may have aggravated this challenge since they could not go to the school or other learning spaces beyond the vicinity of their respective houses.

Moreover, consistent with the findings of Adarkwah (2021) and Day et al. (2021), the current study reveals that the pandemic somehow exposed the many inequities in the educational systems within and across countries. In the case of a developing country, families from lower socioeconomic strata have limited learning space at home, access to quality Internet service, and online learning resources. The socioeconomic profile of the students is the same reason financial problems frequently surfaced from their responses. These students frequently linked the lack of financial resources to their access to the Internet, educational materials, and equipment necessary for online learning. Regarding the impact of the health crisis on students' online learning experience, the findings reveal that teaching and learning quality and students' mental health were the most affected. The anxiety that students experienced does not only come from the threats of the virus itself but also from social and physical restrictions, unfamiliarity with new learning platforms, technical issues, and concerns about financial resources. These findings are consistent with that of Copeland et al. (2021) and Fawaz et al. (2021), who reported the adverse effects of the pandemic on students' mental and emotional well-being. This data highlights the need to provide serious attention to the mediating effects of mental health, restrictions in mobility, and preparedness in delivering online learning.

Furthermore, this result is comparable to Mckee, Orlov, and Rees-Jones's (2020) study where they found that online learning during the pandemic hurt student learning, but did not hurt particular demographic groups more than others. However, they did find that if the instructor used active learning techniques, students were more engaged, and thus learning outcomes improved.

CONCLUSION

Based on the major findings of the study, it can be concluded that the implementation of the online educational community could not be indicative of the performance of the students. Since there is no significant relationship between the implementation of utilizing online education, online learning can still continue as a learning modality whether there is an ongoing pandemic or not because there might be other factors that affect the performance of the students. The mode of the teaching-learning process could not affect the performance of the students.

From the findings of the study, the following recommendations are suggested: The implementation of the online educational community may be continued as a mode of learning and may be supplemented by other learning materials such as e-modules. The implementation of the online education community may be improved by formulating specific implementation guidelines agreed upon by teachers, students, and parents. Proper orientation on the guidelines and policies that must be observed in the implementation of the online educational community may be done before the start of the school year or the semester. Feedbacking should be done by the teachers from time to time for the improvement of students' learning.

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