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Editorial
Editorial Welcome

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Editor-in-Chief, Journal of Online Higher Education

I am pleased to welcome you to JOHE's final 2019 issue!

Online education is subject to the same difficulties as more traditional education, and one of these is the effect mental health issues have on our students and their performance in the classroom. This issue we are pleased to publish the first of two articles exploring mental illness in online learning environment; the second will be published as part of our March issue, so look forward to that as well!

This quarter's issue also contains a peer-reviewed article on evaluating a comprehensive course website made with the Moodle learning management system (LMS). Our Reflection in Online Education this issue looks at identifying the qualities of effective online instructors. We also have a book review recommending Leslie F. Stebbins' book Finding Reliable Information Online about effective online search methods and its value to online students and instructor alike.

JOHE continues to expand and we have big plans for next year. Our next issue will be released in March, and I encourage all our readers who may be interested to submit any articles or research they may have related to online education. We look forward to working with you!

As December comes to a close and the New Year begins, I wish you all the happiest of holiday seasons and a prosperous 2020!

I hope you enjoy this issue!

Sarah Fulkes

Editor, Journal of Online Higher Education

Peer-Reviewed Article

Quantitative Courses in Higher Education: Effectiveness of a Comprehensive Course Website

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Abstract: The aim of the study was to examine the effectiveness of a course website prepared by Moodle in higher education. The goal was to examine students' views towards comprehensive quantitative course websites. The research was based on three samples of students who studied three quantitative courses, accompanied by a Moodle website. All three course sites were meticulously prepared by a lecturer who is experienced in educational technology. Each site covers the course fully, including texts, links, video lectures, exercises, and exams. Students were asked to fill out an online questionnaire to assess the importance of different features of the course site, as well as to evaluate these features for the sites they studied with. Moreover, they were asked to evaluate the contribution of the course site to their learning.

The study findings show that according to students' perceptions, Moodle comprehensive course site was perceived as very important for learning quantitative courses. The specific sites examined were highly rated for the following characteristics: communication with the lecturer, course text, monitoring and evaluation, learning convenience, and videos. Moreover, it was found that the course site has a tremendous contribution to the process of learning quantitative courses. Due to the extensive contribution of comprehensive course sites to the study of quantitative courses, it is recommended to develop such sites properly in institutions of higher education, which teach courses of this type.

Keywords: learning management systems, Moodle, learning, educational technology

Introduction

General Background

A course site is a web-based tool designed for managing, documenting, monitoring, reporting, and delivering a course in both higher education and other educational systems,

whether they be in traditional classrooms, distance learning, or a hybrid of the two. A course website may include a variety of resources (texts, hyperlinks, audio, images, video clips, etc.) and can be helpful for establishing communication among students and instructors (discussion forums, messages, emails, instant messages, etc.). It is also useful in monitoring and evaluating student progress via assignment management applications, exams, exercises, and attendance registration. With this wide range of functions, a course website becomes a central tool for group study and an intersection for links to internal and external resources. One easy way for lecturers to develop a course site to meet the needs of students in higher education is by using a learning management system (LMS) (Ghilay, 2017).

LMSs have become widely used in higher education (Dobre, 2015). According to an Educause Center for Analysis and Research (ECAR) survey, 85% of faculty use an LMS (with 56% using it on a daily basis), and 83% of students use an LMS (with 56% using it in most or all courses) (Brown, Dehoney, & Millichap, 2015, p. 2). Higher education institutions benefit from using an LMS in many ways, including: (a) flexible access to learning content, (b) a centralized location for learning, (c) tracking and reporting tools to enhance student learning and performance, (d) increased efficiency in student activities, (e) increased communication, and (f) learning analytics.

Moodle (Modular Object-Oriented Dynamic Learning Environment) is one of the most common learning management systems in the academic world (Ghilay, 2017). It has a market share of 19.1% (713 institutions) and is ranked second in the world (Edutechnica, 2016). Moodle uses open source PHP code that was first developed by Martin Dougiamas while he was working at Curtin University. Moodle is currently managed by Moodle Pty Ltd, who regularly implement improvements and upgrades to the software. It can be installed free of charge on an institutional server or by purchasing storage services, installation, and maintenance from a company engaged in that activity (Ghilay, 2017).

Moodle and similar LMSs exhibit several characteristics designed to meet learner and faculty needs (Ghilay, 2017):

1. **Closed groups.** The system is primarily (though not always) designed for private groups of students who belong to an individual course or course group.

2. **Hierarchy of authorizations.** The system is based on a hierarchy of user roles (manager, course creator, teacher, non-editing teacher, student, guest, etc.) with

each user in the hierarchy having both permitted and prohibited actions. The principal distinction is between students and lecturers: lecturers can update course content whereas students may usually only watch, read, or submit assignments. Nevertheless, specific authorization for access to certain resources may be granted to users not usually having these permissions.

3. **Hidden and displayed items.** The system has options for concealing a single element, a group of articles, or a complete course from the eyes of learners. Furthermore, it is possible to protect individual items based on criteria (such as group membership or even more complex conditions).

4. **User registration and opening course sites.** A lecturer can manually manage user registration including appropriate permissions as well as create course websites manually (based upon proper authorization).

5. **Editing and duplicating.** Every item in the system can be updated, deleted, or duplicated. The possibility of duplicating items may assist faculty in preparing question banks for exams. In this way, workflow can be streamlined, eliminating the necessity to build every single element from scratch.

6. **Resource types.** The system can manage groups of central resources such as:

   a. *Files.* Different kinds of files (text, images, audio, or videos) and folders.

   b. *Communication.* Messages, emails, chats, and forums.

   c. *Links.* Different links can be defined for internal or external resources.

   d. *Formatted pages.* Advanced users can independently design pages including text, hyperlinks, images, embedded video and so on.

   e. *Assignments.* Different kinds of coursework can be defined and submitted through the system subject to various restrictions determined by the instructor (such as dates, the number of items submitted, file size, group membership, etc.). Complete communication between students and lecturer regarding an assignment can be managed including enablement of resubmissions.

   f. *Exams/exercises.* Different kinds of question banks can be created (multiple choice, matching, essay, and many others) and may be divided into subtopics as needed. Different restrictions can be determined for every practice/test such as the amount of permitted submissions, time limit, date limit, mixing of

questions and answers, random retrieval of issues from certain topics, reliance on previous submissions, restrictions regarding where exams can be taken, etc.

g. ***Reports.*** Monitoring of learner activity, which resources were accessed, when, for how long, from what IP address, students' personal details, etc.

h. ***Unique applications.*** The system enables the use of specific applications such as a glossary, blog management, Wiki, etc.

Dahlstrom, Brooks, and Bichsel, (2014) found the following characteristics of LMS users:

- Faculty and students value the LMS as an enhancement to their teaching and learning experiences, but relatively few use the advanced features.

- User satisfaction is highest for basic LMS features and lowest for advanced applications.

- According to stakeholders, faculty could be more effective instructors while students could learn better if both were more skilled using LMS.

- Mobile devices have become available to students everywhere, and mobile access to organizational systems designed for students like the LMS is becoming more and more common and important.

- Students and faculty want the LMS to have enhanced features and operational functions, be personalized, and use analytics to enhance learning outcomes.

Many studies look at the performance or the perceptions of students using an LMS. Research studies conducted in the 2000s indicate that students' satisfaction with an LMS is affected by course content and design (Selim, 2007), course quality and perceived ease of use (Sun, Tsai, Finger, Chen, & Yeh, 2008), and perceived usefulness and self-efficacy (Liaw, Huang, & Chen, 2007).

Altunoğlu (2017) found that students' interactions with an LMS were personally driven; though they achieved similar levels of success, different students used different approaches to the LMS, with variation "both found in students' prioritizing their preference of the type of e-learning material and in unit content" (p. 100). The students' most intense criticism of the course

sites focused on the quality of the content, such as exercises or chapter summaries, or on the content's variety.

Emelyanova and Voronina (2014) looked at a pilot LMS implemented at National Research University in Russia. Here the results were more negative: they found that students perceived that the convenience of the LMS was slightly above average, that the LMS was an ineffective tool for managing their learning process, and the grading made with the LMS was less objective.

A study by Mwalumbwe and Mtebe (2017) at Mbeya University of Science and Technology indicates that forums, peer interaction, and exercises are significant factors for students' academic achievement in blended learning. However, the time spent on LMS, the number of downloads, and the frequency of entry did not significantly affect students' learning performance

Additional recent studies examining learners' perspectives found that an LMS course site is helpful for the convenience of learning, it has a positive contribution to the learning process (Ghilay, 2017) and the course site is an effective tool to facilitate learning because of its interactive environment and availability (Kurata, Bano & Marcelo, 2018).

Ghilay (2017) provided evidence that the effectiveness of the course site depends to a large extent on the degree of investment by the lecturer. Students explicitly pointed out that they received significant support for their learning process only when the course site was well maintained. Indeed, the ability of faculty members to manage their course sites properly depends upon the knowledge and skills that they have acquired. Faculty point out unambiguously that they need guidance and direction and without them, they find it difficult to meet student expectations (Ghilay, 2017).

Ghilay (2019) also examined the effectiveness of course sites according to views of lecturers with different levels of activity in LMS. The findings indicated that there was a significant difference between two groups of lecturers: (a) faculty members whose level of activity in LMS is medium or higher and (b) lecturers whose level of activity is low. With regard to the first group, all of the course site characteristics examined were very highly rated. On the other hand, in relation to the second group, most of the factors examined were rated with lower than intermediate scores. As such, it was recommended that institutions of higher education influenced their faculty members to increase their activity in LMS. In cases where the

reason for low level of activity is lack of knowledge or skills, it can be helpful to direct the lecturers to appropriate training programs. If the reasons for the low activity are other, Ghilay (2019) recommends to identify them, and as a result, encourage and motivate faculty members both intrinsically and extrinsically so that they become more active in LMS.

Examining the Effectiveness of Quantitative Comprehensive Course Sites

Ghilay (2018) claims that learning quantitative courses in higher education can be difficult because "students need to understand complex principles and procedures and solve complicated questions" (p. 14) . These courses use a hierarchical structure, with new knowledge depending on previously accumulated knowledge. When students experience a gap in this prior knowledge, it becomes more difficult to overcome. Ghilay's (2018) Comprehensive Technology-Based Learning (CTBL) model was created to alleviate this knowledge gap burden. The CTBL model can be employed on a course site that provides full coverage of the curriculum by implementing an ongoing process of diagnosis and prognosis designed to overcome students' difficulties and knowledge gaps.

The present study examines students' attitudes regarding various characteristics of quantitative comprehensive course sites (here defined as a course site based on the CTBL model) constructed using the Moodle LMS. These attributes are divided into two main categories:

1. The importance of the characteristics.
2. The current situation of these characteristics.

These features were examined in various types of quantitative courses in higher education, both in face-to-face and distance learning: mathematics, statistics, and a computer course (PSPP). Three groups of students who studied the following courses were examined:

1. **Mathematics for Business Administration.** First-year students (face-to-face).
2. **Introduction to Statistics.** First-year students (face-to-face).
3. **Fundamentals of PSPP (statistical software equivalent to SPSS).** Third-year students (distance).

All three courses had a comprehensive Moodle site based on the CTBL model including the following components:

1. Access to all resources from one single page (designed by Moodle tab display).
2. A complete coverage of the course texts.
3. All lectures (video).

4. Solutions to all exercises (using texts for math/statistics and video clips for PSPP).

5. Computerized exercises (practice and submission).

6. Feedback questionnaires.

7. All the practice files and software tools (such as .sav files for PSPP, TeamViewer quick support for all courses, etc.).

8. Practice computerized exams.

9. Final computerized exams.

10. Students' attendance (relevant to face-to-face courses only: math and statistics).

All students who participated in the study were enrolled in courses in the Department of Management and Economics at the NB School of Design and Education, Haifa, Israel during the first semester of the 2017-2018 school year. The three courses included the following topics:

Mathematics for Business Administration. Functions, linear inequalities, quadratic inequalities, exponents and roots, logarithms, arithmetic sequence, geometric sequence, derivatives, and integrals.

Introduction to Statistics. Introduction - basic terms, measurement scales, group data in tables, visualization of the distribution of frequencies, rules of summation (basic use of Sigma and Sigma rules), measures of central tendency (mode, midrange, median and mean), measures of dispersion, relative position of data (standard scores), distribution of standard scores, and the standard normal curve.

Fundamentals of PSPP. Introduction to PSPP, data editor, foundations of descriptive statistics, syntax, case selection, additional tools for descriptive statistics, means, computerized variables, sort files and data control, independent samples t-test, paired sample t-test and one sample t-test, ANOVA (one way analysis of variance), correlations, crosstabs and chi-squared test, and reliability (Cronbach's alpha including item analysis) and factor analysis.

Methods

The study examined students' attitudes toward three quantitative course sites, which are divided into two categories: theoretical courses and computer courses. The same lecturer prepared all the course sites and conducted the three courses.

The Research Questions

The research questions intended to examine the characteristics and advantages of effective quantitative course sites in higher education. The following research questions were worded:

- "What are the characteristics of effective quantitative course sites according to students' attitudes?"
- "Based on the learners' views, what are the advantages of effective course sites in the process of learning quantitative courses?"

Population and Samples

Population. The research population addressed through the study included all those who were studying quantitative courses, accompanied by a course site at institutions of higher education in Israel.

Sample. Three samples that have been examined are presented in Table 1:

Table 1

The study samples

No.	Course	Year	Semester	Way of learning	Sample size	Rate of response
1	Mathematics for Business Administration	2017-18	1	Face-to-face	27	93.1% (27/29)
2	Introduction to Statistics	2017-18	1	Face-to-face	26	96.3% (26/27)
3	Fundamentals of PSPP	2017-18	1	Distance	17	89.5% (17/19)
	Overall				70	

Tools

Respondents were asked to answer an online five-point Likert scale questionnaire consisting of 62 items (see Table 2 for a detailed list) broken down as follows:

- 28 items intended to examine the preferred situation: importance of characteristics of effective course sites (1-very low importance, 2- low importance, 3-moderate importance, 4-high importance, 5- very high importance).

- The same 28 items were presented again to examine the current status: evaluating these characteristics regarding to the three course sites examined (1-very bad, 2-bad, 3- good, 4-very good, 5-excellent).

- 6 items intended to examine the contribution of a comprehensive course site to the learning process (1- very little, 2- little, 3-moderate, 4-much, 5-very much).

At the end of the questionnaire, the following open-ended question was added:

- "Does the course site help you in the learning process? Please explain and detail your answer."

Data Analysis

The following six factors divided into two main categories (inputs and their outcome) were examined:

Inputs.

- The convenience of the course site.

- Texts.

- Video clips.

- Monitoring and evaluation.

- Communication with the lecturer.

Outcome.

- The contribution of the site to the learning process.

Table 2 summarizes the six factors, the items composing them, and the reliability. Regarding the first five factors, two values of reliability are presented: relating to the importance of the characteristics (the first) and the current status (the second). For each factor, a mean score was calculated (including standard deviation). One Way ANOVA was conducted for checking significant differences among the above three courses. A paired samples t-test was undertaken as well for checking significant differences between pairs of factors ($\alpha \leq 0.05$).

Table 2

Factors and reliability

Factors	Questionnaire's Questions
Convenience of the course site ($\alpha = 0.905/0.913$)	Nice shape.
	The menu is friendly and easy to use.
	Concentration of all learning resources in one place.
	Easy login from a variety of tools: PC, Mobile, Tablet, Smartphone.
	The possibility to study at any time, 24 hours a day, 7 days a week.
	Quick access to all learning needs.
	Easy operation of the site.
	Overcome time and place restrictions.
	Possibility to continue studying outside the classroom.
	Easy presentation of course topics.
Texts ($\alpha = 0.954/0.871$)	Full coverage of the texts according to the course curriculum.
	Clear wording of the texts.
	Clear presentation of mathematical expressions in texts.
	Displaying the texts in the correct order.
	Presentation of solutions for all exercises (lectures, class exercises, and submission exercises).
	Comprehensive feedback questionnaires for each topic.
	Mathematical accuracy of all texts in the course.
Video clips ($\alpha = 0.916/0.965$)	Full coverage of the entire curriculum using videos.
	A clear presentation of the mathematical expressions in the video clips.
	Clear explanations in video clips.
	Introducing the videos in the correct order.
	Short duration of each video.
	High technical quality of video clips (high resolution).
	Mathematical accuracy of all video clips in the course.

Monitoring and evaluation ($\alpha = 1.000/0.901$)	Submission of exercises through the site. Submission of tests through the site.
Communication with the lecturer ($\alpha = 0.948/1.000$)	Effective communication with the lecturer (messages, forums, etc.). The possibility of receiving online assistance from the lecturer.
Contribution to the learning process ($\alpha = 0.926$)	The course site helps me in the process of learning a quantitative course. I prefer a quantitative course that is accompanied by a Moodle site and which covers the course well over courses where there is no site. The site improves the learning process as it is regularly updated according to the learning needs of the course. A combination of different resources in the course site (text, video, exercises, etc.) helps me learn a quantitative course. The Moodle site helps me understand the material in the course. I would prefer that all the quantitative courses in the college would have a Moodle site that fully covers the curriculum.

Results

Table 3 presents the mean scores of the three samples.

Table 3

Samples' mean scores

Factor	Course	Importance			Current Status		
		N	Mean	S.D.	N	Mean	S.D.
Convenience	Math	27	4.60	.50	27	4.74	.39
	Statistics	26	4.69	.49	26	4.79	.37
	PSPP	17	4.52	.37	17	4.52	.31
Texts	Math	27	4.76	.40	27	4.74	.42
	Statistics	26	4.77	.38	26	4.75	.40
	PSPP	17	4.48	.61	17	4.67	.44
Video clips	Math	27	4.68	.38	27	4.62	.51
	Statistics	26	4.68	.38	26	4.57	.59
	PSPP	17	4.63	.46	17	4.51	.58
Monitoring and evaluation	Math	27	4.78	.42	27	4.74	.45
	Statistics	26	4.85	.37	26	4.77	.43
	PSPP	17	4.65	.70	17	4.62	.42
Communication with the lecturer	Math	27	4.85	.36	27	4.78	.42
	Statistics	26	4.92	.27	26	4.77	.43
	PSPP	17	4.82	.50	17	4.76	.44

Factor	Course	N	Mean	S.D.
Contribution to the learning process	Math	27	4.62	.49
	Statistics	26	4.63	.49
	PSPP	17	4.55	.44

Below are One Way ANOVA ($\alpha \leq 0.05$) results intended to find out if there are significant differences between the mean scores of all the samples, relating to the factors mentioned above:

Importance of Characteristics

- **Convenience:** $F_{(2,67)} = 0.689$, p $= .506$

- **Texts:** $F_{(2,67)} = 2.502$, p $= .090$

- **Video clips:** $F_{(2,67)} = 0.085$, p $= .918$

- **Monitoring and evaluation:** $F_{(2,67)} = 0.860$, p $= .428$

- **Communication with the lecturer:** $F_{(2,67)} = 0.431$, p $= .652$

Current Status

- **Convenience:** $F_{(2,67)} = 3.031$, p $= .055$

- **Texts:** $F_{(2,67)} = 0.224$, p $= .800$

- **Video clips:** $F_{(2,67)} = 0.211$, p $= .810$

- **Monitoring and evaluation:** $F_{(2,67)} = 0.673$, p $= .513$

- **Communication with the lecturer:** $F_{(2,67)} = 0.005$, p $= .995$

Outcome

- **The contribution of the site to the learning process:** $F_{(2,67)} = 0.173, p = .842$

The above findings indicate that no significant differences were found between the means of all the samples, for all factors. The mean factors for all these samples together are shown in Table 4 below.

Table 4

Mean factors: Three samples together

Factor	Importance			Current Status		
	N	Mean	S.D.	N	Mean	S.D.
Communication with the lecturer	70	4.87	0.37	70	4.77	0.42
Texts	70	4.69	0.47	70	4.73	0.41
Monitoring and evaluation	70	4.77	0.49	70	4.72	0.43
Convenience	70	4.61	0.47	70	4.70	0.38
Video clips	70	4.67	0.40	70	4.58	0.55

Factor	N	Mean	S.D.
Contribution to the learning process	70	4.61	0.47

The findings of Table 4 can be summarized as follows:

Regarding the current status, all factors have been very highly rated by learners for all the different courses or ways of learning: communication with the lecturer (4.77), texts (4.73), monitoring and evaluation (4.72), convenience (4.70) and video clips (4.58). To find out whether there are significant differences between the five factors mentioned above (for both importance and current status), a paired samples t-test was undertaken. Based on this statistical test, there were no significant differences between the first four factors. This means that the first four factors are very highly and equally rated. Regarding the fifth factor (video clips), there was a significant difference between it and all the others. Although these differences are significant, the gaps are very small: the lowest mean (current status, video clips: 4.58) is only 4% lower than the highest (communication with the lecturer: 4.77). Therefore, it can be concluded that all 5 factors are highly rated, as all factor values are 4.58 or higher.

Besides, the importance of all these factors is also perceived to be very high (all mean values are higher than 4.6): communication with the lecturer (4.87), texts (4.69), monitoring and evaluation (4.77), convenience (4.61) and video clips (4.68). In addition, the course site was found to provide a significant contribution to the learning process (4.61).

This means that students evaluate the comprehensive course site as providing excellent communication with them, the texts and assessment process are very useful, the site is very convenient to use, and the video clips are very useful for their learning. Moreover, all these characteristics are perceived as very important for students' learning. For the bottom line, comprehensive course sites are perceived to have a great impact on students' learning, as they have a direct and very high contribution to their learning.

The open-ended question strengthens the closed items and gives them more validity as presented in the following quotations of respondents:

Mathematics for Business Administration:

- "The course site helps me learn and understand all the topics independently and at my own pace."
- "The course Mathematics for Business Administration is the best in college and I understand everything even though the material is not easy."

Introduction to Statistics:

- "The course is very interesting. It is very good that there is an opportunity to learn through the course website - the material is interesting and the method of study creates motivation."

- "Thanks to the course site, everything was clear and understandable."

Fundamentals of PSPP:

- "The course site helps me a lot in the learning process."

- "The course website is very helpful for me to learn."

The above quotes emphasize the high effectiveness of the comprehensive site for the study of quantitative courses in higher education. Since quantitative courses are difficult to understand, a comprehensive site is perceived as very helpful for students' learning and assimilation of course topics.

Discussion

Studying quantitative courses in higher education is difficult because students should understand complex principles and procedures. In such courses, learners must acquire the ability to solve theoretical complex problems (such as using mathematics or statistics), or computer-based problems (such as using PSPP). Creating a course site that comprehensively supports the acquisition of such knowledge is not straightforward. It should systematically cover the whole course curriculum via different learning means, such as texts or video clips. In quantitative courses, comprehensive coverage means that the site includes all the lectures and solutions of exercises designed for both practice and submission and enables effective contact with the lecturer for the continuous support of the learners when they encounter difficulties.

The present study examined comprehensive sites of various types of quantitative courses (theoretical and computer based) and different learning methods (face to face and distance). The findings show that there are no significant differences between all the samples examined. This means that regardless of the learning style or type of quantitative course, the results remain stable, provided that the course site is indeed comprehensive. Such a site has five major advantages: the students receive excellent communication with the lecturer, the texts and the evaluation process are very helpful, the site is very convenient to use, and the videos help students understand and assimilate the content, even on very difficult issues. The result of these

important elements in a quantitative course website is that such a site significantly affects students' learning.

Due to the extensive contribution of comprehensive course sites to the study of quantitative courses, it is recommended to develop such sites properly in institutions of higher education that teach courses of this type. Unfortunately, not all faculty members are familiar with various topics of educational technology, especially the management of online courses. In order to do this in practice, it is necessary to create and deliver training programs, so the lecturers will be familiar with the principles and practice of creating and managing comprehensive course sites. As institutions of higher education face the challenge of training faculty to become qualified comprehensive course managers, the TMOC (Training for Management of Online Courses) model can provide an answer to this challenge (Ghilay, 2017; Ghilay & Ghilay, 2014). TMOC model has two fundamental components:

1. **Curriculum.** The specific topics lecturers should be familiar with in order to manage online courses.

2. **Learning methodologies.** Exemplification of the diverse ways in which lecturers can design their own online curriculums to meet various student needs and learning styles.

It should be emphasized that the realization of this goal is mainly based on the knowledge that the lecturers need to acquire, based on existing resources.

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Increasing mental health awareness and services to meet the needs of online students

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Abstract: This article discusses the need and benefits of colleges providing online students with mental health support and resources. College students who struggle with managing their mental health may also struggle academically. Numerous traditional colleges offer mental health resources to ground students. With the growing number of students pursuing college online, those same resources provided to traditional students are needed for online learners as well. The research confirms that mental health resources are necessary for online students and illustrates that colleges should consider incorporating these resources to assist their students better. This article will discuss that by assessing the mental health concerns of their students and providing the necessary tools, colleges can ensure that students have an increased chance of staying enrolled and completing their degree program. This benefits the college as well given that it can improve retention and lower the number of students that drop out due to mental health-related issues.

Keywords: mental health, online education, student services, online student needs

Introduction

The pursuit of online education is steadily growing and is in high demand because of the flexibility it gives non-traditional students. Non-traditional students are students that pursue education later in life and are typically independent adults that work and/or have children. One reason that online learning is so appealing to many adult learners is that it allows them to have their education work around other obligations such as jobs and family life. Attending college can be a stressful time for any student; however, when students have other essential responsibilities, this can lead to an impact on their mental health. This is why exploring and increasing methods and tools to ensure a student's mental health needs are met is needed.

Obtaining a higher education degree can cause or even worsen a student's mental health issues. The National Alliance on Mental Illness found that 64% of former college students dropped because of a mental health related reason (Gruttadaro & Crudo, 2012, p. 8). An academic goal, like maintaining a certain grade point average, can be stressful for many students and combining that with maintaining employment and raising a family; it is clear to see how these elements can put a strain on a student's mental health. Colleges can help students with this concern by providing early treatment and resources that will help improve the overall well-being of students. With the increase of students choosing to pursue online degrees, colleges should develop more online services geared towards mental health to meet the needs of students that may struggle in this area.

Online Education and Mental Health

Attending college is a life goal for many individuals, yet some that are dealing with mental health issues may not think that this is an option for them. The Higher Education Statistics Agency surveyed 2,843 students and found that the prevalence of depression and anxiety was 15.6% among undergraduate students and 13% for graduate students (Papadatou-Pastou, et al., 2019, p. 2). The mental health of students has become a growing concern for colleges over the years. Dunbar, Sontag-Padilla, Kase, Seelam, and Stein (2018) discuss in their research,

> Approximately 17% or more of college students have a mental health problem.
> However, nearly two-thirds of students with mental health problems do not use mental
> health services, even when on-campus services are available. If untreated, mental health
> problems can persist and lead to long-term consequences, including lower academic
> achievement and unemployment or underemployment (p. 597).

It is quite common for students to experience mental health issues while pursuing their degrees. Barr (2014) confirms this in her article, stating that "in 2012, the American College Health Association (ACHA) annual survey found that some of the factors students reported as impairing academic performance include anxiety (20%), depression (12%), stress (29%), and alcohol/drugs (6%)" (Abstract section, para. 3). While Barr mentions that this survey does not differentiate between online and ground learners, it illustrates the common issues faced by all types of students. The mental health concerns of college students are a current issue since more

students experience anxiety and depression now than in previous years (Chessman & Taylor, 2019).

Historically, online students are seldom offered mental health-related services like counseling because it is assumed online students need less non-academic and emotional support than traditional students (Lederman, 2019). However, online students need services like counseling just as much, if not more than, traditional students. On top of managing mental issues like anxiety or depression, they face significant stressors like parenting, working full-time, life obligations, and most online students are also in accelerated degree programs. Additionally, online students are more likely not to have access to quality mental health providers, issues with staying in communication due to different time zones, as well as their work and life commitments (Einhaus, n.d.). Online students also do not have on-campus connections or support systems like traditional students, so many may also deal with feelings of isolation.

More importantly, online students truly desire support services. Clinefelter, Aslanian, and Magda (2019) conducted a survey where 1,500 current and graduated online college students were asked "Which support services did you use, if offered, by the provider of your online program?", with the results indicating that 23% had used mental health services, 42% would use mental health services if they were offered, and only 35% reported not being interested (p. 42). Mental health support services are in demand for online students, and by providing these services, a university could potentially increase student attendance, grades, and quality of work since these are all areas negatively impacted by their mental health struggles (Barr, 2014). This is why resources and support should also be available for students attending online colleges: they have the potential to be very beneficial to improving a student's success.

Impact on Online Colleges

According to Armstrong, Burcin, Bjerke, and Early (2015), mental health is a significant factor that impacts a student's grades and academic career. Lipson, Abelson, Ceglarek, Phillips, and Eisenberg (2019) state that "the negative effects of mental health problems on student retention suggest that institutional investments in student mental health are likely to generate both increased tuition revenues for institutions and higher earnings for students who attain a college degree" (p. 4). Lipson et al. also highlight that investing in more services for students will have positive results for not only the student, but for the college as well. Furthermore, as

there has been an increase in adults turning towards online options for mental health-related information and treatment (Skierkowski, Florin, Harlow, Machan, & Ye, 2019), many online students may show great interest in online services for mental health management.

The American Psychological Association (2005) conducted a study of 275 faculty members where 56% said they did not know how to work with students who had "hidden" disabilities (p. 21). This information provides an opportunity for online faculty to be trained on how to identify students at risk so that they can offer resources and support options. Lipson et al. (2019) illustrate how using a combination of data to determine a student's risk for dropping might be more beneficial to the college:

> Campus administrators often use low GPA in the previous semester to identify students at risk of dropping out. Yet low GPA alone would identify only 11% of students who would eventually drop out while using low GPA and mental health problems would identify 30 % of students who would withdraw. The results suggest that efforts to identify students who are likely to withdraw would be more effective if based on the combination of low GPA and mental health symptoms (p. 3).

Trying to balance the responsibilities that many adult learners face is challenging, and most fall short in one or more areas (parenting, working, academic work, or their health). Students may also lack a proper support system, and all of these factors tied together make it less likely that they will finish their degree program on time or in some cases at all (Taniguchi & Kaufman, 2005). Thus, the research is simple: improving a student's mental health can also increase their academic performance and graduation rates (Lipson, et al., 2019).

Mental Health Support Options

Unfortunately, some students do not know what mental health supports are available to them through their university. Another concern is that some wait until they are in a terrible place to reach out for help, as opposed to knowing what support tools are offered in the event things do go wrong (Barr, 2014). Today, there are numerous options for managing mental health issues, and individuals can even discover what will best fit them and learn about managing their needs via in-person counseling, wellness apps, and even distance counseling. Promoting the importance of being mentally healthy, in addition to online counseling services or assistance locating counseling services in their local area, would help these students. This is crucial since

online faculty do not have the benefit of interacting with a student that may be in a crisis like traditional faculty, so they would not be able to pick up on signs like emotional changes or a decrease in personal hygiene. Online faculty can check for signs of distress in changes in work quality, low or inconsistent attendance (how many times the student logs into the course), or concerning emails. Online Education (n.d.) illustrates how online colleges can begin to transition into including mental health services to students:

> Colleges have offered student personal services through on-campus health and counseling centers, but the sensitive nature of this support made it difficult to deliver online. This is changing as online learning platforms integrate even more sophisticated security features to verify students' identities and protect private information. These innovations allow colleges to safely deliver personal support services to online learners. Strategic partnerships with health and counseling organizations expand students' options. (Personal Support Services section, para. 1)

Furthermore, Barr (2014) discusses in her research several detailed ways that colleges and universities can better meet the mental health needs of online students, with most of these items currently being utilized today (Best Practices in Mental Health Resources for Online Students section, para. 3-8):

1. **Pre-enrollment services:** On the web-pages describing online programs and courses, self-assessment tools can be posted for students to evaluate their readiness for online programs. This "front-end" focus on the personality characteristics and work habits necessary for online academic success can assist in preventing problems after admissions and enrollment.

2. **Mental health education:** Provide links to articles on issues common to college students (Stress, fatigue, depression, anxiety, eating disorders, and substance abuse)

3. **Crisis services:** Prominently display phone numbers for crisis and suicide hotlines.

4. **Self-help services:** Provide access to tools for self-evaluation, with accompanying articles on strategies for coping with common mental health issues.

5. **Referral to disability services:** Provide a link to the institution's office for students with disabilities.

6. **Counseling services:** Provide links to the campus counseling center clearly state what services are/are not available to distance students.

If these types of resources are available for online learners, administrators could educate students on these mental health options and drive home the fact that it is crucial to familiarize oneself with the support tools before a crisis occurs. Reminding students periodically of tools that will help them be successful is essential, both ensuring that they are consistently made aware of support options and that they are notified of any updates or changes. In addition to services that may be offered by their college, students should research what is available to them in their community. Some might even find it useful to try a variety of tools and resources to see what will work best for their specific situation. This will allow students to find the best option to fit their needs since some may not realize that mental health techniques have evolved from just face-to-face counseling.

Conclusion

With the increase in the availability of online programs, administrators of online colleges and online degree programs have the opportunity to promote and educate students on mental health awareness. Research shows that when college students suffer from mental health disorders, the symptoms can increase their chances of not completing their program. These individuals will benefit from their colleges providing mental health options that will help them manage their symptoms while pursuing their degrees online. There are many options online colleges could implement to meet the mental health needs of their students. Online students face additional struggles that many traditional students do not, and when mental health issues are combined, they are more likely not to complete their degree program (balancing personal responsibilities and schoolwork is challenging in itself, so untreated mental health issues can only aggravate the situation). Increasing services to these students will benefit not only the student but the institution as well, specifically with retention. It thus is very important for online universities to provide mental health support services to online students so that they, too, have the opportunity to flourish in their academic setting like traditional students.

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Book Review
Finding Reliable Information Online: Adventures of an Information Sleuth by Leslie F. Stebbins

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Students frequently have assignments requiring them to find and reference outside materials. For students enrolled in online courses (and for many students who are not), virtually all such materials will be found via a web browser. Searching for reliable information online, then, becomes an essential skill for the eventual success of online students.

Leslie F. Stebbins' *Finding Reliable Information Online: Adventures of an Information Sleuth* walks the reader through different methods of searching for and evaluating online information. Stebbins does not gear her explanations to college students specifically, but instead takes a conversational tone, talking about her personal searching experiences and explaining why certain search techniques provided better results than others.

Despite her book's focus on searching outside of academia, Stebbins is no stranger to scholarly searching; she holds Master's degrees in Education and in Information Science and has 20 years of experience working in library research instruction and information literacy within higher education settings. Stebbins seems to have written *Finding Reliable Information Online* with its potential for use in formal teaching settings in mind, providing an instructor's manual (Instructor guide, 2015) and the chapter on scholarly research (The wisdom of a crowd of experts, 2015) for free on her personal website.

Most of Stebbins' examples are applicable to everyday life rather than for gathering evidence to use in college-level writing, but her techniques can be easily applied to academic searching. For instance, Stebbins talks about how most people stop at the first relevant Google result; in higher education, many students using scholarly databases likewise stop at the first relevant result—both searchers are working under the assumption the algorithm is sorting for reliability (when in actuality, it merely sorts for relevance). Stebbins refutes this presumption by acknowledging the failings of even the best available information. After all, researchers (like

most content creators) often publish in such a way that ensures their careers continue to exist—whether that be being predisposed towards affirming their prior hypotheses, fabricating data, or merely by tacitly acknowledging that sponsors only provide funding when results are likely to be marketable. Since there are so many fallible sources out there, online information seekers need search techniques that favor the good sources and expose the unreliable.

Stebbins uses a framework of six strategies while performing a search:

1. Start at the source (Look for a specific source to search instead of just searching for the information itself)

2. Pay attention to the psychology of search (Understand how your psychology is affecting the search terms you choose)

3. Expert, amateur, or crowd (Identify whether you need an expert, or if amateur or crowd-sourced information is sufficient)

4. Context, motivation, and bias (Understand the context of both the source and your own searching needs)

5. Comparison and corroboration (Compare the source to other independent sources and check that the claim itself holds up)

6. Going deep, or not (Decide when the information is important enough to keep digging deeper) (Finding Reliable Information Online, 2015, pp. xxi-xxiv).

In each chapter, Stebbins applies these six strategies to evaluate the processes she used in answering a specific research question. This framework is helpful not only as a self-evaluation tool for students to use, but also acts as a grounding mechanism that summarizes all the twists and turns Stebbins took in getting her answers.

One major theme of this book is that the search for information will usually be messy and sometimes may result in failure. Stebbins' first major search example ends with her failing to find a clear answer to her question about whether the adage that "red wine is good for you" is verified by science. Given that "being wrong in science is expected and necessary," Stebbins recognizes she must be patient and wait for more experiments to be conducted before she can have a more definitive answer (2015, p. 18). In another instance, Stebbins ends up losing several days in trying to track down one particular researcher who is quoted by science blogs but was otherwise unfindable; here, the lesson is it's important to recognize when you've become too

distracted from your goal and need to switch tactics. Despite the lack of guaranteed success, though, Stebbins remains an advocate of trying to learn more, as digging deep will often allow you to make more informed decisions.

Another reoccurring theme in this book is why experts should be sought out when amateur or crowd-sourced information can easily "satisfice"—that is, be considered good enough to use (p. 63). Using the first hit on Google may be acceptable when looking for purely factual information, but it's less so when looking for subjective answers to important questions. Users often end up clicking on first-page websites, but these are often deeply flawed. Review sites and blogs in particular are often highly subject to the influences of inconsistent evaluation scores, fake reviews, monetary incentives to be overly supportive, confirmation bias, the network effect, content farming, search optimization engine (SEO) manipulation, and other factors that make it hard to judge a website's information accurately. Established professionals in the field, however, have spent the time necessary to see nuances that others would miss and are more likely to judge things consistently and reliably. In some fields, these professionals are part of industries that have explicit codes of ethics that control for various biasing influences, making their stated opinions all the more valuable.

Of particular interest for higher education purposes is Chapter 3, which focuses on finding reliable scholarly research (The wisdom of a crowd of experts, 2015). This chapter shows the reader how to combine the strengths of free cumulative databases (like Google Scholar) and library subscription databases (like Web of Science or Scopus) to find the best applicable research. Stebbins has learned to not simply let the database determine what articles are valuable, but instead goes to literature reviews first to understand who is recognized as having made important contributions and get a sense for where the scholarly conversation currently sits. She uses this information to track down those cited articles and tracing forward to see what other articles build on that information. In this way, Stebbins is able to create a more complete picture of the entire scholarly conversation to see what sticks and what has been abandoned.

Overall, *Finding Reliable Information Online* is a valuable text for anyone who wants to learn more about information literacy. Any instructor who teaches students how to find online

information should consider reading this book, whether that be to enhance their own understanding or to use as a required part of the student curriculum.

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Reflection in Online Education
From the Trainer's Desk: Favorable Qualities of an Online Instructor

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Abstract: Strong instructors are key to the online student's success. Many factors determine who will be an effective online instructor and who will not. This brief outline describes desirable qualities and offers ways to recognize whether instructor candidates will likely be successful in the online classroom.

Keywords: online training, instructor training, training, online classroom management

Introduction

Hiring, training, and teaching online have become commonplace in upper academia in recent years, but as convenient as it is, there are risks and challenges that come with it. Specific qualities make for a good online instructor and these can be assessed before a new faculty member enters the classroom, or even before the start of training. Guidelines, suggestions, and subject-matter insight can be used in the interviewing and hiring processes to better select future candidates who perform well in the classroom and offer students what they need to succeed.

Qualities of an Instructor in Training

For the past nine years, I have functioned as faculty trainer for an online university. Our population has grown tremendously; according to our online registrar's records, in 2009 we had 134 students, but in 2019 our numbers have risen to just over 9,000—an increase by more than a factor of 65. To address this rapidly growing student population, instructor numbers have more than doubled, with a current roster of over 350 adjunct and full-time faculty members teaching nearly 600 course sections. These numbers require ongoing new instructor training in an organized and time-conscious fashion. As our courses are just four weeks long, time is limited for an instructor to assimilate into the online classroom atmosphere. The climate is fast-paced, and an instructor must be geared for success from Day 1 of the course.

Additionally, my conversations with many new instructors who trained and taught elsewhere indicate our university is focused on student success more so than most other academic institutions. While all upper academia generally desires for their students to do well, we provide resources and support incomparable to most institutions, from our learning coaches who are available to work with students six days a week, to our writing center that lets student meet one-on-one with a tutor or submit papers for review. Our expectations for our faculty are likewise very high, since they are critical to attaining the university's overall goal to have our students "achieve success in career-oriented online programs…culminating in satisfactory career placement or advancement in current employment" (Independence University, n.d.).

Our faculty training timeline follows the 4-week course model, with a cohort of new instructors beginning training every four weeks. Over the past nine years, I have worked with about 600 new hires in approximately 100 cohorts, ranging from groups of just 1 or 2 to as many as 16. With faculty numbers at over 350, it is clear that these 600 new hires are not all currently teaching for us—not all faculty adequately complete the training process, nor are they all successful during the early stages of teaching online. However, while online instructors have come and gone over the years, about 16% of our current faculty have been on staff for nine years or more, hired prior to my employment at the university. Overall, we have a strong faculty who not only care about students, but demonstrate through regular audits they are meeting or exceeding university expectations.

What qualities do these successful and dedicated faculty members possess? During the training process, I see good qualities and great qualities (and occasionally not-so-great qualities). In my position, I find it more enjoyable to work with faculty who have certain characteristics. That sounds self-serving; however, I believe that these same traits I find to be admirable when working with new faculty are also reflected in their interactions with students. When our faculty exhibit these traits, their students will typically enjoy class more, be more engaged with their instructor and the course material, and ultimately be more successful in school.

Qualities that Make a Difference

An instructor in training should…

1.   **Be friendly.** The instructor makes an effort to be personable. In our first meeting (which takes place in video conferencing software), the instructor turns on their

web camera, offers a pleasant greeting, and sounds excited and motivated to be in training.

2. **Respond to email in a timely fashion.** The instructor accesses email regularly and responds with frequency and regularity.

3. **Communicate clearly and effectively in writing.** The instructor expresses ideas effectively. When problems occur in training, he or she describes what steps have been taken, explains what is not working correctly, and includes examples or links to aid the trainer in troubleshooting.

4. **Communicate clearly and effectively via video conferencing.** The instructor presents ideas and concepts in an understandable fashion and is personable in the live classroom setting.

5. **Read and follow instructions.** While we often hear that "teachers make the worst students," training is the time to prove this unbecoming saying wrong. The instructor reads all training material offered and reviews the content and instructions to gain a clear understanding of the expectations while completing training assignments.

6. **Be aware of deadlines.** The instructor meets or works ahead of stated deadlines in the training and pre-training process. This includes (but is not limited to) account setup and access of systems and completion of tasks and assignments.

7. **Be able to "be the student."** The instructor offers helpful feedback, career-relevant examples, and real-world applications of the lesson. This is demonstrated via video conferencing sessions, assignment feedback, and in classroom online discussions.

These qualities affect training success and the transition into the online classroom. An instructor's performance in training is directly transferrable to what can be expected in the classroom. For example, related to the quality "be friendly," if an instructor writes terse emails and comes across as bored, all-knowing, or unfriendly during training, we can expect similar behavior in the classroom with students. Conversely, the instructor who makes an extra effort to be friendly and personable to the trainer will likely do the same with their students. Because a

student who enjoys the instructor is likely to be more engaged in the classroom, this is an important aspect of online teaching.

Due to the lack of face-to-face interaction, being able to convey a good-natured attitude online is key to teaching success. As an example of the second quality described above, an instructor who "responds to email in a timely fashion" during training can be expected to do the same with future students. This instructor will address questions about assignments, expectations, and other classroom-related matters without too much of a delay that could potentially hinder students from being timely and effective in completing assignments. Without providing additional details on each quality listed, it is sufficient to reiterate that the instructor's performance in training is indicative of how they will perform in the classroom with students.

Due to this correlation, when an instructor does not possess or demonstrate these qualities, the trainer should alert his or her supervisor. It is not necessarily a call for dismissal, but the supervisor should be aware of the situation and should contact the instructor to discuss expectations. The instructor may not be aware their behavior is of concern and deserves the opportunity to improve. This contact shows interest and displays a united front, indicating that the trainer and supervisor are supportive of the training process and are working together to ensure its success. This communication between the trainer and supervisor also serves as a matter of record, should the instructor need to be terminated at some point in the future.

How to Assess the Qualities and Choose the Best Candidates

When reaching out to candidates during the hiring process, it is important to engage with them in multiple formats. Via email, one can assess the first three qualities presented: does the instructor sound friendly in writing, have an appropriate response time, and communicate clearly and effectively? An instructor who does not use greetings and closings, writes in incomplete or confusing sentences, overuses punctuation, types in ALL CAPS, uses trendy acronyms, and/or does not respond within 24–48 hours may not represent the desired qualities of a future online instructor. Role-playing could also be used in an email interaction by offering open-ended questions for instructors to respond to in a hypothetical student-teacher scenario to assess their friendliness, timeliness, and communication skills.

If video conferencing is an expectation of the online teaching format, then it should also be a part of the interviewing process. As in the email example offered above, the interviewer

might role-play the part of a student who has questions about the assignment while the candidate demonstrates his or her ability to think quickly, be flexible, and offer clear explanations in a hypothetical situation. The instructor might also be asked to present a few content slides on their chosen subject matter. This is not to assess their ability to use the software—as it may be their first time in a specific platform—but instead is an opportunity to consider their personality, passion, and ability to convey information to their future students. A video conference lesson demonstration is also a chance to assess the last quality on the list, that of being able to "be the student." Look for an instructor who offers the tools and knowledge students need and displays a clear interest in the success of their students.

Finally, the qualities of being able to read and follow instructions and to be aware of deadlines can be analyzed from the human resources/hiring standpoint. Paperwork, whether digital or physical, is always a part of the interviewing and/or hiring process. Does the instructor read the instructions that are offered and complete the paperwork correctly the first time? Do they meet submission deadlines as requested? These first steps of the process are early indicators that the instructor takes the position seriously and can likely be counted on in the future to address deadlines and meet goals. Attention to detail and concern for accuracy at this stage should definitely be appreciated and noted.

Conclusion

In conclusion, hiring and training online instructors presents challenges in vetting quality candidates who are equipped to offer what students need to succeed in higher education. By following the examples offered in this paper, valuable time can be saved by screening candidates during the onboarding process and during training, thereby ensuring that all efforts have been made to select and prepare instructors sufficiently for the online classroom.

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