Exploring the Potential of a Ticketing-Based Student Support System for Open and Distance e-Learning Institutions

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Abstract

Quality assurance in higher education can be examined in multiple dimensions, one being effective student support. It is arguably one of the most important aspects of an educational institution. This paper argues for the potential benefits of a ticketing-based system as part of an open and distance e-learning (ODeL) institution's quality assurance initiatives in student support. In order to determine the ticketing-based system's potential benefits, various educational ticketing-based support systems are reviewed. Aside from document reviews, interviews with the program chair, students, and support staff were also conducted as a way to identify the primary student support challenges in ODeL. Some of the issues that arose had to do with personalized support and interaction; response times; consistent and accurate solutions; clearly defined academic processes and policies; record keeping; the bulk of queries; and information lost during staff turnover. Interview data also revealed a set of criteria used to qualify excellent student support services both from an institutional and student perspective. Lastly, ODeL student support challenges that can be addressed by a ticketing-based system were assessed by analyzing the experiences of students, support staff, and faculty.

Keywords: *student support, ticketing-based system, knowledge base, quality assurance*

Introduction

Quality assurance (QA) is a collective process of monitoring the work processes of an organization to ensure that they are complying with the organizational standards (Allais, 2009). Although more commonly associated with business, QA is also applicable to the field of higher education. As a matter of fact, QA in ODeL is one of the thrusts under University of the Philippines Open University's (UPOU) Strategic Plan 2016-2019 (UPOU Strategic Plan 2016-2019, n.d.).

In the context of universities, QA serves as a tool to ensure students receive quality education through quality learning opportunities (European Association for Quality Assurance in Higher Education [ENQA], 2015). The quality of the learning experience is measured through various factors, including but not limited to the equipment, facilities, and support the university provides students.

Student support is integral to achieving a university's mission and vision. Assisting students, answering queries, and clarifying matters related to students' program of study are just some of the activities under student support. In a nutshell, effective student support services facilitate a smoother learning experience and improve student retention, success, and completion. Providing support is even more important in an ODeL setting, where face-to-face services and personalized interaction are challenging to deliver (Crawley & Howe, 2005).

Thus, measuring and ensuring the quality of a university's student support services is a necessity. Evaluating and reviewing current systems in place will ensure that the university continues offering high-quality service to the students, consequently helping them achieve their learning goals (Ryan, 2015).

One of UPOU's flagship programs, *QAlidad,* aims to promote and establish an effective QA framework and system within the university. In line with this, the Faculty of Information and Communication Studies (FICS) tried an experimental knowledge base and ticketing-based system for the Bachelor of Arts in Multimedia Studies (BAMS) program.

The Freshdesk-based system consolidated accurate and verifiable information related to BAMS. The frequently asked questions (FAQs) are in the form of comprehensive solution articles. The Program Chair, FICS Secretary, registration adviser, FICS mailer, and all other support staff will have the capability to view advice that has been given, assess its soundness, and make the necessary corrections. Additionally, the system will enable issue-tracking, ensuring no student queries are overlooked. Records of student inquiries will be systematized, making it easier to review and take note of students that have experienced any issue since the beginning of their residency that may prevent them from graduating.

Furthermore, information published on the system may evolve from individualized advice to a community knowledge base where emerging best practices and advising will be reused. Each time individual support is given to a student's issue, answers may be archived, analyzed, and tagged using machine learning techniques to provide automated support in subsequent inquiries.

The purpose behind the implementation of this kind of system stems mainly from the need to establish a single reliable source of information about the BAMS program. Currently, at least eight online sources are accessible to students— both in formal and informal channels— which detail FAQs, enrollment procedures, suggested plans of study, and other registration and academic processes relevant to the program. The lack of a centralized repository makes students prone to following conflicting or outdated information. Moreover, with the recently revised BAMS curriculum taking effect, as well as the implementation of new enrollment policies, it has become even more important to ensure students have access to up-to-date information about the program. Other features of the system will also contribute to improving the student support experience.

This paper argues for the potential benefits of a ticketing-based system as part of an ODeL institution's QA initiatives in student support, by reviewing existing literature and analyzing the experience of students and support staff.

Results may serve as a starting point for further research in the quality of UPOU's student support services. At the same time, this paper will also provide an initial assessment of the system's functionality. Likewise, areas of improvement as well as future considerations in the development and implementation of policies and processes, can be gleaned from the results.

Objectives

In general, this study aimed to explore how a ticketing-based system can contribute to an educational institution's QA initiatives, particularly in the context of student support services.

Specifically, it aimed to:

1. Review ticketing-based support systems used in educational settings;
2. Identify student support challenges in an ODeL setting;
3. Determine factors that constitute effective student support services for ODeL; and,
4. Assess which student support challenges can be addressed by a ticketing-based system.

Review of Related Studies

Student support, which covers enrollment, technical, academic, and personal services, is a vital part of any educational institution. Academic advising, education planning, instructional support, admission, and financial aid, among others, are all blanketed under student support. Having effective communication between the university and the student through student support will then lead to a successful quality assurance system (Ryan, 2015). For this reason, it's central in ensuring students have a quality learning experience (Crawley & Howe, 2005). One of the ways to provide streamlined and effective student support services is through academic helpdesks— the need for which has been apparent for decades (Middleton & Marcella, 1997).

Particularly in ODeL, student support is important where face-to-face interaction is challenging to provide, and students have unique online learning support needs. A support system that doesn't satisfy the needs of its students may have implications on student retention, success, and completion (Crawley & Howe, 2005). As demonstrated by the case of Duquesne University, online students require much more student support than residential or on-campus students. To have successful online learners, institutions must have student-centric support services which make use of available technologies and apply best practices (Newberry & Deluca, 2014).

As a working solution, a number of higher education institutions have implemented helpdesks or student information systems to answer queries and deliver 24-hour support (Sykes, 2002); provide consistent and centralized support system (Evans & Jones, 2005); unify technical assistance mechanisms and gain evaluation capacity through metrics (Bulchand-Gidumal & Melian-Gonzalez, 2010); manage user complaints (Shafie, Yusoff, & Pawi, 2012); and, resolve technical issues in curriculum delivery (Myers, Hojjat, Miller, Bruer, & Ferrone, 2018).

These helpdesks, either homegrown (Evans & Jones, 2005; Saul, Black, & Larsson, 2000) or outsourced (Bulchand-Gidumal & Melian-Gonzalez, 2010; Saul et al., 2000), have the overarching goal of reducing the knowledge gap between educational institutions and students by positively contributing to the institution's student support experience.

In response to this rising need, educational institutions have adopted knowledge base and ticketing-based helpdesk systems such as Zendesk and Freshdesk.

Nottingham Trent University (NTU), Ohio Wesleyan University (OWU), and the University of Lincoln (UoL) chose Zendesk for its simple, flexible, responsive, and people-centered system. The support system is used for record-keeping, issue management, and collaboration with different departments. The knowledge base encourages self-service, so students can find a solution for themselves. It has an open forum format that allows students to pitch in their solutions. It can also be integrated with social media, so stakeholders can raise concerns via Facebook and Twitter. Features like reporting, tracking, macros, and automation, help the university provide more efficient support. In particular, sending status updates and standard responses to their

stakeholders was a big timesaver. Analytics from the support system also helps the university identify trends. All three universities take advantage of the mobile app to provide remote service ("Help Desk Software for Schools & Educational Universities | Zendesk," n.d.).

Lesley University and the University of Sydney utilize Freshdesk for its scalable and intuitive characteristics which include multichannel support, Android and iOS apps and robust knowledge base features. The structured response system incorporated tracking, ownership, status, resolution, and accountability for support staff and their assigned tickets ("Freshdesk reduces support response times at The University of Sydney," n.d.). The ability to automate repetitive tasks have reduced response time, improved workflow, and better connection with students. Moreover, business intelligence reports generated from the system's data have given them unique insights into student support. Since implementation, both universities have been able to increase their satisfaction rates ("How Lesley University Turned Students into Rockstar Support Agents," n.d.).

Methodology

This paper explored the challenges of providing student support in an ODeL environment and how it can be supplemented by a ticketing-based system. Firstly, a literature review of ticketing-based systems used by other educational institutions was done. The literature review helped determine the merits of the implementation of such a system.

Stakeholder interviews were also conducted to identify the challenges of student support as well as the characteristics of an effective student system in an ODeL setting. Multiple points of view were considered as participants consisted of currently enrolled BAMS students, BAMS alumni, and support staff. This allowed the researchers to have a basic idea of the transition and challenges from the old system to the Freshdesk ticketing-based system.

Data Gathering

The researchers used convenience sampling to select the research participants due to time constraints and low response rates from previous online surveys of BAMS students. The data gathered were through face-to-face interviews and online interviews.

The interview questions focused on participants' specific experience with the BAMS program student support services pre-and post-implementation of the Freshdesk system. These gauged their perspective on student support challenges in an ODeL environment and how they would qualify for "excellent" student support.

Data Analysis

The paper used thematic content analysis to analyze the stakeholder interviews. Common themes were identified from each stakeholder interview and then patterned with the other interviews. The identified themes were then cross-referenced with the data gathered from the literature review, to come up with a general idea of the benefits and challenges of a ticketing system implementation.

Ethical Considerations

This study complies with the ethical standards set by the University of the Philippines Open University. It was conducted with the informed consent of all study participants. All personal information was protected in accordance with the Philippine Data Privacy Act of 2012, its implementing rules and regulations, as well as related issuances from the National Privacy Commission. Personal information was only retained or stored for as long as the purposes for which they were processed. No sensitive information was drawn from the participants.

Results and Discussions

This paper argued for the potential benefits of a ticketing-based student support system as part of an ODeL institution's QA initiatives. Results of the literature review and stakeholder interviews are summarized below.

Ticketing-based Support Systems used in Educational Settings

The literature review revealed that universities employed knowledge base and ticketing-based support systems so that they can get better insights on the type of issues frequently encountered by stakeholders. Moreover, these types of support systems help universities provide more efficient student support services. Workflows were improved by automating repetitive tasks as well as incorporating a customizable knowledge base.

The knowledge base is available remotely and at any time, so students can readily access relevant information. Because of this, stakeholder satisfaction consistently garners a high rating.

Student Support Challenges

As an ODeL institution, UPOU has a unique set of student support challenges compared to residential educational institutions. On top of enrollment, technical, and academic services, institutions also have to contend with helping students familiarize themselves with an online learning environment (Newberry & Deluca, 2014).

The primary challenge in doing so is ensuring students get the information they're looking for in an accurate and timely manner. Included in this is reconciling students' understanding of academic policies and processes with the intent of the institution.

On the students' side, they cited being unaware of the kind and scope of student support services available to them. They also did not know where to go or whom to contact regarding specific queries. The process of looking for information was described as a trial and error method, visiting various institutional websites before finding the solution to their problem. Even then, they were unsure of the validity and currency of the information. This shows the need for a centralized support system.

Of those who were knowledgeable about the proper support channels, response times and navigability of websites were an issue. One student recalled inquiring about an enrollment procedure, only to receive a response after the period of enrollment. Another student chose to use a general search engine instead of going directly to the university's websites.

From an institutional standpoint, student support issues included record-keeping, document tracking, staff capability, readability of information, and student satisfaction. According to support staff, record-keeping and document tracking are important, especially for staff turnover. It also has implications for tracking a student's academic progress throughout their residency.

Moreover, the readability of solutions affects students' willingness to read through information about academic and administrative processes. As a result, students would still contact the faculty office to inquire about dropping of courses, filing a leave of absence, and requesting a transfer of course credits even though the information is readily available on the support sites.

In terms of support staff's capability, the lack of knowledge about the ins and outs of the BAMS program, in particular, was a hindrance to providing prompt responses. Lastly, student satisfaction lets the support staff know they have resolved a query satisfactorily. In addition, satisfaction of support staff and students should match.

Student support also faces the challenge of increasing the degree of personalized support and interaction. According to Crawley and Howe (2005), it is important to make online student support more personal and emphatic, so that it resembles human interaction closely.

On a larger scale, the diverse characteristics of its online student body also posed some problems. Differences in personality, learning style, and the commitment to an ODeL mode of learning can dictate how students take in and respond to the information or advice they receive.

Characteristics of an Effective Student Support System

Based on the stakeholder interviews, an effective student support system should principally be centralized, supported by the following characteristics:

- High Response Rates
- Issue tracking features
- Accurate and Consistent Solutions
- Clearly defined academic and administrative policies
- Adequately trained support staff
- Degree of Personalization

These serve as criteria for qualifying excellent student support. Each criterion was identified based on the issues faced by the students, program chair, and support staff.

Student Support Experience

The current student support system has a lot of positive attributes in line with the criteria outlined above. Drawing on the stakeholder interviews, some cited the academic and administrative policies outlined in the university's support sites as clear, comprehensive, and helpful. But this sentiment was shared only by those who already knew where to look for pertinent information.

Freshdesk can improve the student support experience firstly by providing a centralized knowledge base. This centralization consequently makes it easier to track a student's previous concerns. Furthermore, a high response rate can be guaranteed as Freshdesk's ticketing system keeps track of unresolved issues and allows priorities for concerns to be set. This means every

issue submitted by the students will be responded to in a timely manner and remain current until the issue has been resolved.

Its solution articles provide accurate and consistent solutions, together with clearly defined academic and administrative policies. Not only are the solution articles visible immediately for ease of access of the students, they also allow remote access and are available 24/7. There is also a degree of personalization in the response to the queries, even with canned responses. In terms of capacitating support staff, the system is user friendly and allows for collaboration.

Before a ticketing system was implemented, students would have to browse through UPOU's websites in order to find a solution to their query. Some of the students were not aware of who to contact, and so they sent program-specific concerns to other departments of the university. They would then be forwarded to the correct department before getting a response. Alternatively, they would send an email to the Faculty Secretary or Faculty Secretary Support in order to get a response. Response rates were timely, but sometimes inconsistent. While most students receive a response to their query within the day, there are some whose concerns are not immediately addressed. Additionally, there are cases where student inquiries were not resolved in time.

With the BAMS student support system, stakeholders noted a variable change in the response times, and accessibility of information. Students browse through solution articles and then file a ticket if they have clarifications. Because the system is treated as the primary source of information, students are sure that the information they're getting is accurate and up to date. Moreover, support for special cases comes directly from the program chair.

Conclusions

As an educational institution, UPOU places a premium on providing quality education through quality learning opportunities. Having an effective student support system is integral to this goal. This paper argues for the potential of a ticketing-based system as a way to improve the university's student support system, through literature reviews and stakeholder interviews.

Based on the literature review, higher education institutions utilize ticketing-based support systems for their ability to respond to the needs of today's students. Given the bulk and complexity of student queries, ticketing systems keep the support process efficient and responsive. Automation, reporting, macros, and tracking features lets universities identify areas for improvement. The knowledge base encourages self-service and thus, reduces the number of tickets submitted. Relevant information is more readily available to the stakeholder because of the system's remote access and availability. Consequently, support services are not confined to the university's office hours.

Stakeholder interviews showed that the primary student support challenges in ODeL include ensuring students are aware of the support systems in place; making sure policies and procedures are clearly stated and understood; and response times are prompt. Issues such as navigability of support sites, tracking the student issues, readability of information, personalization of support and interaction, and meeting students' service satisfaction are also additional challenges that need addressing. Lastly, knowing how to handle the diverse characteristics of the student body also poses a challenge.

Regarding the characteristics of an effective student support system, it should primarily be centralized to reduce misinformation. Furthermore, it should be capable of giving prompt and

accurate responses; tracking student issues; and providing accurate, consistent, and up-to-date solutions for both academic and administrative concerns - all with a degree of personalization. Finally, an online student support system should have adequately trained support staff. All of these can be addressed by the Freshdesk-based system, which serves as a centralized knowledge base and ticketing system.

In conclusion, a ticketing-based system such as Freshdesk is a promising intervention to improve the quality of an ODeL institution's student support services. Thus, more studies have to be done to confirm its effectiveness.

Recommendations

Given the findings of this paper, a few considerations in the development and implementation of policies and processes could be the following:

1. The university should have students' needs in mind when implementing technology-based support systems. The ease of use and complexity of a system should be taken into account.
2. There should be more activities aimed at informing students about the proper support channels to facilitate easier access to information.
3. Student support services should be capable of catering to UPOU's wide range of students. Regarding the presentation of information, the university should consider the different learning styles of its stakeholders.
4. Before implementing any student support system, support staff should have adequate training.

This paper argues for the benefits of a ticketing-based system using an analysis of existing literature as well as stakeholders' initial experience as a basis. Going forward, future studies that can be done to get a better grasp of how to improve the university's student support system includes:

1. An analysis of stakeholders' awareness of the university's support systems should be done. This could reveal students' sources of information, as well as if they're subscribing to the university's official support channels.
2. There are several cases where student queries may already be answered by FAQs posted on the university's support sites. Research to determine the reason why students still send in queries despite having solutions in the FAQs could be conducted. Results could show implications on how the FAQs are structured, or how the support services can be improved.
3. The support system's usability and acceptability could be examined to see how usage of the system can be increased.
4. The system could be evaluated on its usefulness and ease of use after a certain period of implementation. This would have an implication on the relevance of the student support as well as how it can be improved.

At the same time, further research may incorporate the following methods:

1. A larger sample size of respondents, as well as probability sampling, is recommended. In this way, statistical analysis can be done.
2. Respondents should have a wider sociodemographic background. Students and support

staff from other programs of study may be included to increase the variability of data. Results will also be generalizable for the online learners of UPOU, and not just of the BAMS program. Furthermore, this will inform the university of how the knowledge base and ticketing system can be effectively implemented by other programs as well.

References

Abu hasan, H.F.A., Ilias, A.,Rahman, R., & Razak, M. (2009). Service Quality and Student Satisfaction: A Case Study at Private Higher Education Institutions. *International Business Research, 11*(7). https://doi.org/10.5539/ibr.v1n3p163

Allais, S. M. (2009). Quality assurance in education. *Issues in education policy,* 5. https://www.researchgate.net/publication/44841566_Quality_assurance_in_education

Britto, M., & Rush, S. (2013). Developing and implementing comprehensive student support services for online students. *Journal of Asynchronous Learning Networks, 17*(1), 29–42. https://files.eric.ed.gov/fulltext/EJ1011371.pdf

Bulchand-Gidumal, J., & Melian-Gonzalez, S. (2010). Redesign of the IS/ICT help desk at a Spanish public university. *Higher Education, 60*(2), 205–216. https://doi.org/10.1007/s10734-009-9295-9

Crawley, A., & Howe, A. (2005). Supporting Online Students. In G. McClellan & J. Stringer (Eds.), *The Handbook of Student Affairs Administration*, 343–364. John Wiley and Sons. https://bit.ly/2Vikvye

European Association for Quality Assurance in Higher Education (ENQA). (2015). *Standards and guidelines for quality assurance in the European Higher Education Area (ESG)*. Brussels: ENQA. https://www.enqa.eu/wp-content/uploads/2015/11/ESG_2015.pdf

Evans, K., & Jones, W. T. (2005). *Building an IT help desk - From zero to hero*. In Proceedings ACM SIGUCCS User Services Conference, 68–74. https://doi.org/10.1145/1099435.1099452

Freshdesk reduces support response times at The University of Sydney. (n.d.). Retrieved November 8, 2019, from https://freshdesk.com/resources/case-study/university-of-sydney

How Lesley University Turned Students into Rockstar Support Agents. (n.d.). Retrieved November 8, 2019, from https://freshdesk.com/resources/case-study/lesley-university

Jain, R., Sinha, G., & Sahney, S. (2011). Conceptualizing service quality in higher education. *Asian Journal on Quality, 12*(3), 296–314.

Help Desk Software for Schools & Educational Universities | Zendesk. (n.d.). Retrieved November 8, 2019, from https://www.zendesk.com/support/details/education/

Middleton, I. A., & Marcella, R. (1997). In need of support: The academic help desk. *Campus-Wide Information Systems, 14*(4), 120–127. https://doi.org/10.1108/10650749710194510

Myers, S., Hojjat, S., Miller, R., Bruer, S., & Ferrone, M. (2018). Development of a student-driven information technology support service. *Currents in Pharmacy Teaching and Learning, 10*(10), 1391–1405. https://doi.org/10.1016/j.cptl.2018.07.008

Newberry, R., & Deluca, C. (2014). Building a foundation for success through student services for online learners. *Journal of Asynchronous Learning Network, 17*(4), 25–40. https://doi.org/10.24059/olj.v17i4.385

Ryan, T. (2015). Quality assurance in higher education: A review of literature. *Higher learning research communications, 5*(4).

Saul, J., Black, B., & Larsson, E. (2000). *Helpdesk.Drew.Edu: Home growing a helpdesk solution using open-source technology.* In Proceedings ACM SIGUCCS User Services Conference, 289–293. http://www1.udel.edu/siguccs2000/FP/36-Black.pdf

Shafie, F., Yusoff, W. Z. W., & Pawi, S. (2012). Users' satisfaction towards facilities management, FM help desk in public higher educational institutions in Malaysia. *Advances in Management & Applied Economics, 2*(3), 59–69. http://www.scienpress.com/Upload/AMAE%2FVol 2_3_5.pdf

Sykes, B. J. (2002). Help desk: An Academic First? *Educase Quarterly*, (1), 50–53. https://er.educause.edu/articles/2000/1/the-threecontinent-24hour-help-desk-an-academic-first

UP Open University. (n.d.). *UP open university strategic plan 2016-2019*.http://old.upou.edu.ph/images/stories/downloads/2013/UPOU_Strategic_Plan_2013-2016_17June2013_2.pdf