Do Engineering Educators Read?: Appraising a University Reading Program

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Abstract: This paper sought to find out how effective implementing a reading program called Project Read Everything About your Field, Digest, and Share (Project READS) among the School of Engineering, Architecture and Information Technology Education (SEAITE) faculty members of the University of Saint Louis, Philippines, because of the underutilization of library resources. As it has been five years since its implementation, the need to find out how well the Project Implementation was necessary. This descriptive study then presents the evaluation of the Project READS program of the among full-time and part-time engineering educators. The results reveal that most of them are engaged in professional readings along their field of specialization. Moreover, Project READS is effective and sustainable. Suggestions to further improve the Project's implementation are also advanced to fully appreciate this professional reading project's effect on engineering educators and learners.

Keywords: Project READS, Reading program, Effectiveness of a Reading Program in Engineering and Architecture

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1. Introduction

Great Schools Partnership (GSP) (2013) describes professional development as those that refer to a wide variety of specialized training, formal teaching, or advanced professional learning. It intends to help administrators, faculty members or teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness. Two of the professional development programs and objectives that GSP proposes are:1) Training or mentoring in specialized teaching techniques in many different subject areas, such as differentiation (varying teaching techniques based on student learning needs and interests) or literacy strategies (techniques for improving reading and writing skills), for example, and 2) furthering education and knowledge in a teacher's subject area—e.g., learning new scientific theories, expanding knowledge of different historical periods, or learning how to teach subject-area content and concepts more effectively.

From the preceding, one such area that allows a teacher to grow professionally is to undergo training that enables the teacher to address different learning needs and interests and enhance the teachers' professional knowledge in his area of specialization. The latter requires that teachers undergo further studies and continually improve the content, a thing the teachers can do if they experience professional readings.

In a university setting, professional readings require accrediting bodies and assessment bodies, and

even government regulatory bodies. These bodies prescribe specific standards on faculty development including, but not limited to professional tasks, inclusive of journal collections, both print and online. Bruford (2014) cites the importance of professional readings for educators, in that: 1) educator's views and philosophies are shaped and honed, 2) It affords educators theory as the basis for practice, 3) It allows educators to integrate technology, 4) It allows educators good decision making as they have bases in doing so, 5) It can let the educators model learning by doing, and last but not least, 6) building relationships and team spirit and support among colleagues, staff and their students.

Besides, Powell (2005), in a study of nine public schools in the United States, found out that "Teachers, in general, view professional reading as helping them grow in their profession. In this same study, the author also found out that educators would like to read but do not have time to do so. Besides, they also find the professional reading materials easy to understand, applicable, and accessible. Moreover, educators in the said schools strongly believe that professional readings as part of staff development help their growth as professionals. They were more likely to find the professional reading materials applicable, relevant, and worthwhile to what they teach.

The Office of the Vice-President for Academics of the University of Saint Louis, Philippines has conceptualized and institutionalized a program dubbed Project READS: Read Everything About your Field, Digest, and Share. Primarily, Project READS encourages University faculty to read available Library Materials so that they can enhance their teaching and secondly, to maximize all available library learning resources given the low statistics of the utilization of journals by both teachers and students (Pattaguan et al., 2019)

Rudland & Kemp (2004) studied the literature on professional reading among teachers in Australia and overseas. They found out, as literature would suggest, "that teachers engage in relatively little professional reading, especially when compared to the reading habits of other professionals. Further, the reading that they undertake is principally from periodicals that are largely pragmatic."

The university's case in this study plays a vital role in discovering how well educational institutions must manage professional reading programs to motivate or inspire educators to be steadfast in their positions to further their teaching and advance students' learning.

Cunningham and Stewart (2012) studied US architects and professional engineers' views of time spent on reading, writing, and evaluating various information products, as well as their perspectives of specific quality characteristics and the relative significance in meeting work goals during a seminar held at eight locations in seven states. They found out that architects and professional engineers: 1) spend the most amount of time reading correspondence and the least amount of time reading management reports, 2) correspondence to be an essential reading activity, 3) spend the most amount of time writing correspondence, closely followed by nearly equal time spent writing and editing technical reports and proposals, wherein organization, comprehensiveness, and accuracy are the most critical aspects while indicating mechanical issues such as grammar and spelling as the least important aspects of technical documents.

A digest of the literature shows limited studies on professional reading programs particular to Engineering, Architecture, and related fields about their being educators. In this context, this study gained inspiration to find out whether Engineering, Architecture, and related fields' professionals in educational institutions do professional readings to enhance their teaching functions or not, and if they do, what kind of materials do they read?

2. Methods

This study used the quantitative type of research to assess the effectiveness of Project READS implementation among Engineering Educators of the SEAITE of the University of Saint Louis. The study respondents were thirty-four full-time and four part-time faculty of the School of REDACTED for the School Year 2018-2019.

Pattaguan et al. (2019) developed a quantitative questionnaire to assess the implementation of the Project READS program by the University of Saint Louis. The questionnaire consists of two parts. The first part was about the kind of Professional Readings of the Faculty. The second part was the Evaluation portion of the Project READS and its aims, program effectiveness, program implementation, and program sustainability.

The identity of the respondents was not divulged in keeping with the ethics of doing research. An expressed consent was sought before the administration of the questionnaire.

Data relative to Project READS were analyzed using descriptive statistics such as frequency and percentage.

Table 1 : Professional Readings of Engineering Educators

Topics	N	%	Rank
Engineering and Architecture	48	72.72	1
Information Technology	7	10.60	2
Disaster Risk Reduction and Management	4	6.06	3
Teaching and Learning	2	3.03	5.5
Engineering Research and Technical Writing	2	3.03	5.5
Mathematics Education	3	4.56	4
TOTAL	66	100	

Table 1 presents the different professional readings of engineering educators for the School Year 2018-2019. It shows that almost all of the professional readings of engineering educators focused on engineering and architecture topics. The findings may imply that engineering educators read and share readings on their field of specialization to update them regarding current trends and issues in their areas. Furthermore, articles related to engineering and architecture are good sources of information used in teaching. Previous literature revealed that teachers should not limit their discussions on the required textbooks of the course but rather expand their horizons by reading and supplementing related articles and readings to the discussion (Moats, 2004; Coburn, 2001; Bean, 2004).

Meanwhile, the table further shows that other topics being read and shared by engineering educators

focused on information technology, disaster risk reduction, management, teaching and learning, engineering research and technical writing, and mathematics education. It is vital to notice that part of engineering educators' professional readings was teaching and learning and engineering research and technical writing. The findings mean that engineering educators consider other essential aspects of being an effective educator, such as teaching and learning, because engineering educators' formation is on applied sciences and engineering and not on the teaching profession. Hence, the need to learn the concepts of teaching such as strategies, assessment, and classroom management is also an utmost concern of engineering educators. Engineering educators also include articles s on engineering research and technical writing in their readings. The finding then implies that engineering educators also consider the role of research as part of every educator's trifocal functions in all universities in the Philippines.

Smith (2003) confirms the finding in this table that educators read different articles. In that, electronic access to journals—particularly library-funded access—is integral to research activities, with the vast majority of respondents reporting they read at least one article from an electronic source every week.

Table 2 : Evaluation of the Project READS Program

Program Evaluation Elements	Effective		Effec
	N	%	N
Project READS' Aim PROJECT READS is a program aimed at maximum utilization of available Journals, print and online, by the faculty/teachers to use these readings to enhance their teaching of the professional courses/subjects they are assigned**.**	34	89.47	4
Program Effectiveness It translates to the teacher being able to relate his subject matter to the readings.	32	84.21	6

It enhances students' learning and appreciation of the lessons.	33	86.84	5	13.16
It enhances faculty's reading habits to incorporate research findings and recent developments in the field in the overall discussion in class.	30	78.95	8	21.05
Program Implementation				
The Program Chair/Area Coordinator/Department Head informed the faculty of the Project READS implementation.	33	86.84	5	13.16
The faculty member is given a schedule to	30	86.84	8	13.16
The faculty member volunteered to share during the meeting.				
A follow-up by the program Chair/Area Coordinator/Department Head is done on those who were not given the opportunity to share.	34	89.47	4	10.53
Program Sustainability				
The program is sustainable and hence should be further implemented.	33	86.84	5	13.16

Table 2 presents the evaluation of the Project READS by the engineering educators. The table shows that along with the Project READS program's aim, engineering educators assessed it as effective. Through the Project READS, engineering educators use the journal acquisitions by the university library. Meanwhile, the table further shows that as for its program effectiveness, engineering educators assessed the Project READS program as effective. Specifically, engineering educators believe that they can relate the readings to their subject matters and that the program can enhance engineering students' learning and appreciation of the lessons. This means that most of the readings of engineering educators gear towards their subject matter. This study's findings jibe with previous studies that educators' professional readings enhance teaching methodologies, especially on the delivery of the subject matter (Doubek & Cooper, 2007; Hasbrouck & Tindal, 2006; Opfer & Peddler, 2011; Singh & Shifflette, 1996).

Engineering educators also believe that the Project READS program enhances students' learning and appreciation of the lessons. This is because students have wide and varied readings and instructional materials and are limited to the course's prescribed textbook with the educators' enhancement as they share their readings.

Besides, engineering educators also believe that the project READS enhances faculty's reading habits. These educators can incorporate research findings and recent developments in the class's overall discussion as culled from professional journals' readings. Such finding suggests that Project READS has led to developing and enhancing research skills and capabilities among teachers. The latter is mindful of recent articles that found professional reading habits to teach the research culture among educators. (Macalister, 2010; McNiff, 2010; Vescio, Ross, & Adams, 2008).

Along with program implementation, engineering educators assessed the Project READS as effective. All SEAITE faculty members share their professional readings with their colleagues monthly. The findings also show how educators do collaborative activities. Recent articles stressed collaboration is necessary for the establishment of professional and personal relationships. Because of the latter relationships, educators can draw support from one another towards efficiency and effectiveness. The school's improvement and the success of students are achieved when educators work together or collaborate. (Caspe, Lopez, Chu & Weiss, 2011; Kim & Fortner, 2007). Finally, engineering educators believe that Project READS is effective, hence should be further implemented.

Suggestions for Further Improvement of Project READS

The following data are added notes from the respondents: 1) Project READS must be done sincerely, not because it is required, 2) Project READS can also be implemented in class for further improvement of students, 3) The University should

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provide printed journals for faculty to use, 4) There should be a standard way of doing Project READS, 5) In every session, Project READS must be documented with outputs from participants like a reaction paper 6) Project READS must have a specific schedule, 7) There should be more Research Outputs that should be shared, 8) Project READS should be based on the subjects taught by the faculty.

From the preceding, the author is a proponent of Project READS will use the feedback as a basis for the improvement of the program implementation.

3. Conclusion

Project READS as program intervention for full maximization of available online and print journals in the University Library was effectively implemented and have been found to have promoted professional readings among Engineering Educators over the last five years of its implementation.

The program has engaged Engineering educators in professional readings along their field of specialization. Furthermore, Engineering Educators also read other journals of interest that better equip them to teach different engineering concepts. Additionally, the habit of reading has been imbibed, thereby establishing in them a culture of reading for their professional and personal advancement.

Overall, Project READS is effective and sustainable as experienced by a university and can be fully implemented for continual improvement of teaching and learning.

Recommendations

Since this project evaluation was carried out in a single university department, this study has potential limitations. Results are the perceptions of a limited number of Engineering Educators at the time of the survey. Hence, other educational institutions can also conduct the same study.

Innovations to intervention programs like this Project READS can be thought of and eventually implemented to other institutions based on the respondents' suggestions. After that, these institutions can evaluate after specific years of implementation.

Future researches may be conducted to determine the impact of the Project READS on the learners, them

being the witness to whether their educators share professional readings to them in their day-to-day classes.

Additionally, to further strengthen professional readings among engineering educators, School Administration can include the same as part of the classroom supervision criteria to ensure that educators get accustomed to the latest developments in terms of content and research in their field.

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