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Cover Page Footnote

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Peer Reviewed Article

Embedding Information Literacy Support in a Peer Learning Program: An Exploratory Case Study

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Abstract

The aim of this exploratory study was to investigate how librarians at a public university in Dubai could support the information literacy of student tutors through collaboration with a peer-to-peer learning assistance program. We sought to understand how peer tutors experience, develop and share their information literacy skills. We conducted workshops to help tutors become more aware of information literacy and to develop their fluency and confidence in applying these skills as students and as tutors. Data from a survey, a focus group and a quiz was gathered and analyzed. Findings indicated that while there may have been some gains made in terms of tutors' actual information literacy levels and confidence, a more sustained impact on the learning of tutors is possible through recommended actions.

Keywords: tutors, tutoring, information literacy, peer teaching, higher education

Introduction

Despite the dominance of one-shot library sessions, academic librarians express reservations about the effectiveness of this mode of information literacy (IL) education.¹ At Zayed University (ZU) Library, the situation is no different. Those with instructional roles strive to raise the profile of IL and to reinforce its impact beyond classroom instruction. In support of these goals, we explored a promising area of potential collaboration between the library and the university's peer-tutoring program. After receiving enthusiastic approval and ongoing support from

the program's coordinator and leadership team, we began recruiting tutors as participants in our study. These volunteers participated in a series of workshops we presented to foster their skills and confidence in information literacy. In order to understand their dispositions and to measure the impact of these workshops, we engaged participants in a focus group discussion, a survey and a skills quiz. Through analysis of the resulting quantitative and qualitative data, we gained insights into what an impactful, sustainable collaboration between the library and the peer-tutoring program could be like. We hope it sparks more research and practical interest in the role



of tutors as library advocates, especially at institutions of higher education in the Middle East.

Literature Review

Peer Learning in Higher Education.

Investigations into peer learning hinge on a constructivist view of learning. The act of learning is not understood merely as the attainment of facts but as a complex interaction between learners and their environment that develops their capacity to function in socially approved ways². Educational psychologist Lev Vygotsky argued that in gauging children's mental development, it is important to consider the child's independent problem-solving and their *potential* development as defined by their capacity for learning while under the guidance of a teacher or working with a more proficient colleague. Vygotsky viewed potential development as an essential aspect of how learners internalize skills and concepts towards achieving fluency: "learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers."³ He did not argue that social interaction alone always supports learning. In fact, the impact of a number of cultural, contextual, personal and interpersonal variables continues to be explored in the literature⁴. Nevertheless, Vygotsky's theory is important in explaining how peer tutoring works.

Formal tutoring programs represent but one iteration of a wide range of educational practices that seek to exploit the learning potential of peer interaction. These practices include mentoring, communities of practice, and tutoring, which are "characterized by specific role-taking as tutor or tutee, with high focus on curriculum content and usually also on clear procedures for interaction, in which participants receive generic and/or specific training."⁵ As Bodemer⁶ notes, a key requirement of peer learning is that the

peers giving and receiving help should be relatively close in terms of ability, thus supporting effective modeling.

Surveys of higher education in North America and Britain indicate that the importance of peer learning and teaching is largely recognized. For example, a survey in the United Kingdom, for example, found that peer learning programs were on the rise in many disciplines and institutions internationally⁷. The literature supports this development by pointing out many benefits of peer tutoring for both tutor and tutee, including improved academic achievement and communication skills.⁸

The Library, Peer Assisted Learning and Information Literacy Instruction.

Contemporary academic libraries have complex roles providing a range of services, technology and space in support of learning and research. The rebranding of libraries as learning or information commons reflects a shift wherein libraries move beyond their traditional role and instead become "components (and sometimes hubs) of campus-wide initiatives to encourage teaching and learning with technology and collaboration among (or colocation with) learning support units such as academic skills and tutorial centers, writing centers, and faculty development programs."⁹ It is unsurprising that academic libraries have become a focal point for peer-to-peer learning. Some librarians view this trend as a challenge, presenting opportunities to expand librarians' educational reach in this age when library resources are not students' first or even second choice for information. Zauha argues that librarians have much to gain from these arrangements:

"[We] want to learn from the...tutors how to shift the work of research librarians away from the fortress of the desk, how to move it out of



the kingdom of the perfect answer into a conversation model that is more dynamic, approachable, student-centered.”¹⁰

Investigations into peer tutoring as a support for library education have examined programs developed as stand-alone support services as well as those integrated into existing services. An example of the stand-alone type include one described by Bodemer¹¹; in the LibRAT (Library Research Assistance Technician) program students were hired and trained to provide online chat reference help. This role expanded to delivering one-shot library sessions to beginner communications courses. Both students and faculty agreed that the instruction was valuable. In an alternative approach at Grand Valley State University¹², designers moved away from the term ‘tutors,’ believing that the word connoted something too close to a formal teaching role. Instead, they developed a Peer *Consultant* Program, wherein a three-tiered training process focused on the interpersonal competency of the consultant rather than their information literacy skills: “Deep engagement with peers is the priority”¹³ Questionnaire data showed that students had favorable responses to the service, while consultants reported gains in communications and information literacy skills. Some stand-alone schemes developed with a particular course or program in mind. For example, the Information Literacy Advocates program at the University of Nottingham offered a for-credit course to train mentors in supporting their peers in health sciences to use library resources.¹⁴

Bolton, Pugliese and Singleton-Jackson¹⁵ described a program similar to the one at Nottingham that focusses on students in a first-year university transition course. A main feature of the course had been providing students access to peer mentors – senior students who have taken a full-year course in mentorship and learning. Realizing that IL skills were an unpredicted problem for first-year students, designers re-

vised the mentorship and learning course so tutors could build their skills and confidence in this area.

Regarding the considerable overlap between writing and research, writing centers and libraries appear to be a natural fit. Ferer¹⁶ notes that one advantage of writing center and library collaboration is the chance to cross-promote, which is particularly important when the two entities do not share the same roof. In some instances, librarians have embedded themselves permanently in writing centers to provide reference help at the point-of-need. Other collaborations involve librarians in writing center staff / tutors training. Particularly in the case of peer tutors, this training extended the reach of librarians while also providing models for why and how to use library resources. A theme in the research is that students are more likely to approach a peer than a librarian for help. Therefore, engagement with tutors is a way to get valuable feedback for librarians on how to promote information services and resources.

In summary, the literature suggests a number of points to promote success in library/tutoring center collaboration, including the following:

- A clear delineation of roles should be provided where there is chance for overlap (e.g., librarian/tutor or between tutors in different subject areas).
- Tutors require sufficient training to provide information literacy support, but
- Training should prioritize communication skills over information literacy.
- Training should emphasize modeling over explaining/instructing, as well as reflective practice.
- Devoting time and energy into building the relationships between librarians and peer learning assistants is crucial for the collaboration’s success.

Institutional Context

This study took place at Zayed University, a public, English-language institution in the United Arab Emirates. The university's curriculum prepares Emirati graduates to thrive in the public and private sectors in a national economy that is increasingly becoming knowledge-based. Information literacy is an institution-wide learning outcome. "Graduates will be able to find, evaluate and use appropriate information from multiple sources to respond to a variety of needs."¹⁷ While librarians' leading role as advocates for information literacy skills is generally acknowledged, in the absence of a for-credit IL course taught by librarians, our actual teaching role is limited. Typically, the faculty invite librarians to present a one-shot session of eighty minutes in the process of a research assignment, with the goals of helping students find proper academic sources and to use the sources according to guidelines for academic integrity. When assessed, these sessions garner high satisfaction ratings from students¹⁸ and, more anecdotally, appreciation from classroom instructors who note the improved results in the quality of students' resources. However, based on our interactions at the reference desk and from students who visit our offices indicate that students, librarians realized they were not progressing in the research process and did not know where to start. Among other issues, they were confused about developing topics, finding resources and integrating information properly into projects. These problems point to a need for an ongoing personalized support beyond that which librarians can provide.

Personalized learning support is precisely what students receive from the Peer Assistance Leaders (PALs). Beginning in 2011, the program supports student success through an approach to peer tutoring that involves "role modelling, encouragement and positive reinforcement of achievable academic goals."¹⁹ Tutors (or PALs)

are students and part-time university employees. They receive instruction in the philosophy and methods of tutoring, but not in IL. The PALs tutoring center is a safe space where students make an appointment to receive guidance from a peer tutor on key concepts and on the process of learning. The program supports student academic success, as well as the tutors' institutional engagement, social network and leadership skills. The program represented an exciting avenue for us to grow our IL offerings beyond our own instruction at high points of potential need: the tutoring sessions.

This collaboration did present some unique challenges. The PALs' tutoring center at ZU is an entity administratively and physically separate from the Library and Learning Commons. We thus approached this collaboration as educators and researchers as well as learners and observers: we were in essence students of these high-functioning students' use of IL in their studies and as tutors, exploring areas where our expertise might have greatest impact. We were very fortunate to work with the PALs' coordinator and the rest of their leadership team, who contributed energy, organizational skills and enthusiasm to this collaboration. This study documents our exploratory first step in what we hope is an ongoing collaboration that will position peer tutors as library advocates who will reinforce the library's IL instruction program. Our focus here is on the tutors; we hope future studies will focus on tutors' impact on tutees' learning.

The following questions guided the study:

- 1) What is the Peer Assisted Leaders' understanding and experience of information literacy? Sub-question: What has been the library's role in this?
- 2) What are the challenges and perceptions these peer leaders face in teaching information literacy skills to fellow students?



Sub-question: How can the library support tutors in this function?

Methods

This study took place over one school term (December to May). The participant volunteers were all female Emirati students working as PALs at Zayed University's Dubai Campus. Of the 19 PALs who originally signed up, 13 completed all three face-to-face workshop sessions. As noted, not all of these 13 took the follow-up quiz or the exit survey. In other words, there was some attrition as the study went on.

PALs participants were initially invited to a focus group meeting where the investigators explained the study to PALs volunteers, who then also signed ethical consent forms. In the focus group the investigators presented verbally and on a whiteboard a series of protocol questions. Both investigators took notes, which they later compared in order to identify themes.

The focus group was followed by two instructional sessions on information literacy. With limited time, the sessions covered these five main topics:

- defining information literacy
- topic development
- keyword and Boolean searching
- how to choose appropriate resources
- APA citation basics and resources

After both instructional sessions were completed, a 13-point post-quiz was distributed to gauge the impact of the sessions on PALs' information literacy knowledge.

The last part of the study involved a brief online survey sent out to all 13 PALs who completed the study. The purpose was to have the participants reflect on the impact of the study, and particularly the instruction, and on their role as PALs and as students.

Findings from Focus Group, Quiz, and Survey

IL Development: Experiences & Challenges.

This study began with a focus group, which addressed the two questions guiding our study: tutors' experience of information literacy and the challenges they face as tutors in helping tutees build their information literacy skills. Of the 19 PALs who initially expressed interest, 14 attended the focus group.

Question #1: Have You Ever, as a Tutor or as a Classmate, Helped Another Person With an Information Literacy Activity They Were Having Trouble With? What Kinds of IL Questions Do You Most Receive?

This question and its follow-up were designed to elicit participants' experience of helping others with IL, and also to see how they understood IL in this role. All participants reported helping first year students with research assignments. As with all questions, participants responded to the follow-up with open-ended discussion. The two main themes that emerged from this discussion were as follows:

1. Students do not know how to begin their research.

Sometimes students come to the PALs when they are just starting their research projects. When PALs engage in the conversation about the assignment, it becomes clear that students often lack understanding of the demands of the assignment. For example, they may have been told to gather scholarly resources but have no idea what they are. Students could not formulate keywords or understand how keywords should be used to search for resources. As one PAL pointed out, "Students don't even know what to put in the search box."

2. Academic integrity is sometimes sacrificed by students in order to complete assignments.

Students will use methods that amount to plagiarism in order to complete their work. PALs notice this as a major problem in the work tutees present. PALs reported hearing students admit copying information from online services to put in their paper. One tutor was asked to correct a paper that a student had paid to be written for her. One PAL described the connection between confusion over expectations:

One student was doing a chem lab report. They didn't know how to do it, the prof didn't show them how so they just copied and pasted.

When asked why students struggle so much and ask for help beyond what is appropriate, the participants noted issues such as insufficient language skills, lack of preparation in high school for university, and that students' previous school experience allowed plagiarism: "[in school] we are allowed to copy and paste and no one says anything to us." Participants also note how difficult it is to 'say no' to peers requesting an inappropriate level of assistance, but they noted that they can and do draw this line because of their tutor training.

Question #2: Tell Us About Anytime You Either Had a Librarian Visit Your Class and/or Came to See a Librarian in The Library? What Kind of Help Were You Able to Get?

The goal of this question was to consider how PALs' experiences with the library and librarians have affected their approach to tutoring and IL. The question generated comparatively little discussion. All of the PALs participants raised their hands in the affirmative, indicating that they remembered a librarian coming to their class at least once in their Zayed University career. One PAL remembered getting help from a librarian in the library to find an article. While

the library databases and library home page were mentioned, PALs could not identify the particular resources presented.

Question #3: Tell Us How You Approach Your Own Assignments. WHAT Tips or Tricks DO You Use to Do Research?

This question was designed to understand the strategies that PALs would be in a position to use in their roles as tutors.

Google scholar is my best friend, it is my only friend.

This is a typical quote and illustrates a main theme from this lively and sometimes contentious discussion, which is that participants equate research with information tools. The question elicited a discussion over their favorite informational tool. Resources mentioned include Google Scholar, Academic Search Complete, Wikipedia, Grammarly and various online citation generators.

Question #4: When You Think of Information Literacy, What Comes to Mind?

The goal of this question was to indicate how PALs understood information literacy. In other words, the investigators wanted to see if this concept meant the same thing to them as it did to librarians. Again, there were few responses to this question. Points mentioned included the following:

- using databases
- finding books
- citation
- using keywords
- evaluation of resources (i.e., not using Wikipedia)

Overall, the focus group produced a number of insights about the PALs and students they tutor:

- Students struggle with basic IL skills.



- Academic integrity is sacrificed by students in order to complete assignments.
- Librarians' reference and instructional activities have little memorable impact on PALs' research activities.
- PALs largely equate research with information tools.
- PALs' understanding of the scope of information literacy is limited.

Skills

After the two instructional sessions in information literacy were taught, a short 13-point quiz (Appendix A) focused on the learning objectives from the sessions was distributed to the 13 PALs who attended, 10 of whom were able to complete it. The results were as follows: N=10, Mean=9.2 (71%), with a standard deviation of 2.

Question three, related to the scope of information literacy, was challenging. In this question, PALs had to check all research activities from a list that would count as information literacy activities. The average score on this question was Mean=2 (50 percent), with a standard deviation of .8. Without this question, the average score of the quiz would have been 81 percent. It is possible that the checklist format of the question caused problems for participants, but it is more likely that the limited number of instructional sessions focused incompletely on the wide scope of information related skills. There was simply not enough time to cover all facets of IL; therefore, the PALs in this study came away with an incomplete picture of the concept.

Reflection

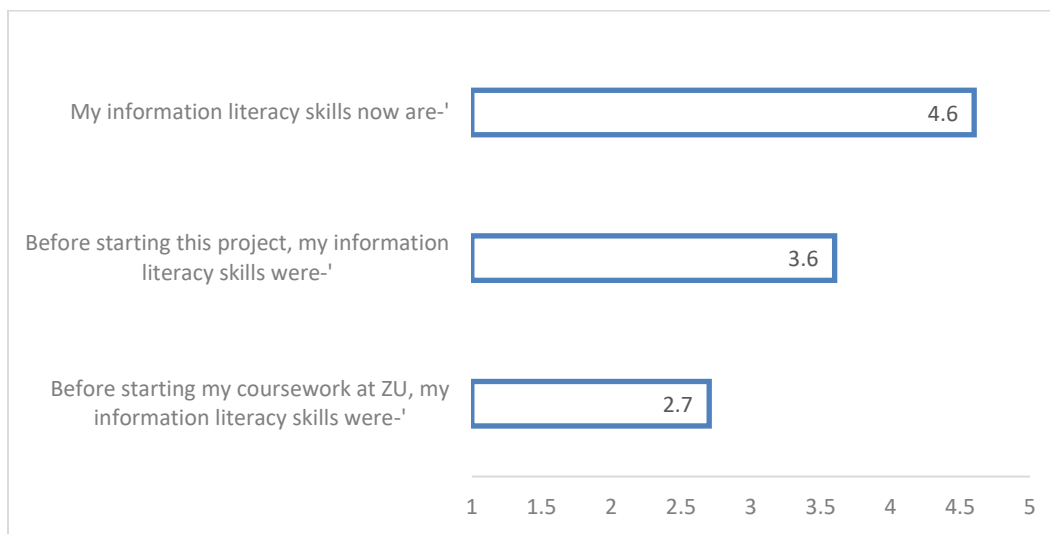
This study concluded with an online survey (see Appendix B) sent out to all 13 PALs who com-

pleted the workshops, and nine PALs responded. This survey gathered demographic information and to gather insights on their experience.

From a demographic standpoint, the day program at Zayed University, Dubai Campus is female only, so all of the participants in the study were female Emirati students. According to the survey, about half of the students went to private schools and the other half to public schools. Three quarters of the participants were mid-way through their studies at ZU (year two or three). All of them had experience with a librarian presenting information literacy skills in their classes, most under three times. All but two of the respondents were in their first year as a PAL tutor.

We were interested to learn how PALs viewed the development of their IL skills leading up to and after this study. PALs were presented with a series of questions rating their skills between poor (1) and excellent (5). As shown in Figure 1 below, PALs rated their skills when they began their ZU careers in the medium range (2.7). Most PALs are completing year two or three of their four-year programs. They see their participation in this study as having had an impact on their skills, with the mean in the medium-high range. Having gone through the sessions for this study, PALs now rate their information skills nearly excellent. This reported change contrasts with the measurement of their actual skills having completed the program as assessed by the short test at the end of the project, wherein the scores were in the 'Good' or even 'Very good' range, but not excellent. There appears to be a discrepancy between PALs' actual skills levels and how they perceive their skill levels.

Figure 1. Average self-rating of PALs' information literacy levels. 1=poor, 5=excellent.



Supporting the perceived benefit of this program, PALs responded positively when asked whether their understanding of information literacy improved because of the instructional sessions presented for this project, with an average score of 4.0. Follow-up comments regarding the most important things they learned did not reveal any particular themes. Comments included the following:

- How search results differ from one search engine to another
- That the library database is user-friendly ("I used to be intimidated by it!")
- About quick find
- knowing how to have reliable sources
- All the different types of research
- Stages of info literacy

PALs were also asked whether they could see the use for students to have information literacy support from trained PALs. Responses were resoundingly positive on this question, with a mean score of 4.7/5.

Discussion

This exploratory study involved a group of peer tutors who participated in a focus group and two IL instructional sessions. They completed an IL quiz and a survey to help us understand their experience in this pilot project. Two main questions and two sub-questions guided the study.

1) What is the Peer Assisted Leaders' understanding and experience of information literacy? Sub-question: What has been the library's role in this?

Overall, PALs are aware of the importance of information literacy mostly in terms of the tools like search engines, library databases and citation generators they use to carry out research activities. For these tutors, IL fluency is awareness of and the ability to use these tools. PALs have less awareness of the skills or dispositions that can be transferred effectively between situations and tools. Whilst research is a regular part of their studies, few PALs can see lasting impact

from a librarian's visit. This conclusion supports the literature²⁰ that questions the impact on learning of one-shot library sessions, the most common format for IL instruction at ZU.

2) What are the challenges and perceptions these peer leaders face in teaching information literacy skills to fellow students?

Sub-question: How can the library support tutors in this function?

The most common concern encountered by peer leaders was the ethical use of information. As well, students do not know how to organize their research. These challenges are most likely related; if a student does not know how to begin her research, she might procrastinate. Procrastinating would increase the likelihood she will use desperate measures as the deadline approaches. It is clear there is scope for more IL support beyond that offered by librarians.

This study reinforced the investigators' view that the peer leaders are ideally suited to extend the reach of librarians to support students in their research. As the survey and quiz show, they have developed both the confidence and some IL skills that they can share with novice researchers. The PALs' concentration on tools might make them ideal advocates for using library tools like Quickfind and databases. Additionally, it is clear from test scores and the response to the instructional sessions provided in this study that training would be helpful in preparing PALs for this role. The good-but-not-great test scores in particular suggest that two isolated information literacy sessions, like one-shot sessions, are not sufficient to develop a high level of fluency.

There was another challenge to this collaboration identified by PALs and investigators alike: that of accommodating PALs' time commitments. The PALs are high-functioning, dedicated students. They are expected to not only

maintain their academic excellence, but to participate in community-building events within the PALs and to represent their peer support program at university events. There are also several team-building events throughout the term. These various activities compete for a place on the PAL's schedule. This made it difficult for the researchers to develop the sustained commitment we were hoping for from our participant volunteers. As a result, the instructional sessions had to be repeated to accommodate the PALs' schedules.

Conclusion

In this study, two librarians collaborated with a university tutoring program to explore the possible role of peer-to-peer teaching in reinforcing our information literacy instruction. Notwithstanding the uneven impact of our training efforts in terms of discernable IL skill levels, the outcomes from the exit survey and comments from the PALs coordinator have reinforced our view that peer-to-peer support is fertile ground for promoting information literacy across campus and across the university curriculum. This study has also taught us that the commitment required to sustain a productive relationship between the PALs and ourselves is significant. Given both the time pressures these students and we ourselves are under, we would like to experiment with various ways of developing peer-to-peer IL support from the one we have tried to pursue for this study. Possibilities include:

- Working with the PALs coordinator to identify a small number of PALs (5-6) who are interested in- and who have relatively well-developed- IL skills. Provide these PALs with enough training to be the point-person for IL/ research support.
- Involving ourselves more in the vibrant social activity calendar of the PALs. This will make us more part of their team and



also help us reach more potential partners on campus.

- Designing or compiling online training modules that all PALs could participate in for extra credit, thus improving their skills and limiting the time needed for extra training.
- Inviting PALs to attend the Library's regular lunchtime faculty training workshops. This will economize librarians' instruction time and also provide learning opportunities for the PALs and faculty, who stand to gain a better understanding of the problems that students face in their research.

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