

UNINTENDED BENEFITS OF INFORMAL LEARNING ON THE PREPARATION OF STUDENTS FOR ADVANCED DEGREE PROGRAMS

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ABSTRACT

On-line communities of practice (CoPs) are grass-roots, informal learning environments in which members discuss professional issues or gain information related to their profession. This exploratory research uncovered that participants of CoPs gain a dimension to their learning, however unintentional, that benefits them in their later pursuits of formal, advanced-degree education. These results not only point to the need and opportunity available to academia and industry to work together to better prepare students for their advanced-degree academic experience, but that, with increased participation in CoPs offering a better prepared student, the curriculum for formal education may be modified to allow for greater depth and/or breadth of study in the same amount of time.

Keywords: Professional development, informal learning, blended learning, community of practice.

INTRODUCTION

The world of higher education is changing. No longer are the majority of students from a traditional undergraduate program enrolling into a traditional graduate program [5]. Instead, more and more of these potential graduate students, anxious to begin their careers in the 'real world' and/or to meet financial obligations, are entering the workforce immediately after obtaining their bachelor's degree. Not long after becoming immersed in their new professions and lives, they realize the need for further education. However, with the kinds of schedules, demands and commitments required when building a new-found career, traditional approaches do not work [15]. In order for academia to serve the needs of these now non-traditional students, it must look for new and innovative educational approaches. Academia has made great progress in meeting the needs of non-traditional students with more flexible scheduling, on-line courses, and cohort-type programs, but there may be additional considerations. This paper considers one such option, which is to look at the needs within a specific profession or related group of professions to develop an informal learning environment that may support the needs of the profession, as well as prepare the students for a

graduate level education. As such, this paper presents the results and analysis of a survey of a group of Army officers who attended the Command and General Staff College (a master's level program) and who reflected on the impact of informal learning on their preparation and performance within that program. From these findings, certain ideas or principles may be culled to provide for a more efficient learning experience.

BACKGROUND

The CompanyCommand CoP

The learning that is taking place in the operational environment (workplace) is important to share with others currently in the same situation, as well as for those who may follow into the same or a similar situation. Many Army personnel seem to agree. "In the spring of 2000 a team of officers developed and launched www.CompanyCommand.com [currently located at www.companycommand.army.mil, a restricted web site that requires registration and validation that one was, is, or is designated to become a company commander] as a means of connecting past, present, and future company commanders in an ongoing conversation about leading soldiers and building combat-ready units. Use of the web site, fueled by word of mouth, spread like wildfire" [6]. The initial group gained volunteers to assist in the effort, and launched subsequent endeavors, including e-newsletters, face-to-face discussion sessions, and additional forums. As the forum grew, the senior leadership at the Military Academy [6], as well as the Battle Command Knowledge Center, Fort Leavenworth, KS, provided additional organizational support. The sections, or parts, of the website include general discussion sections, specific discussion and information sections (i.e., sections for logistics, branch-specific areas, and training), experiential learning and leadership sections, and participative book review sections.

Experiential learning can be thought of in at least two different contexts. On one hand, the term is used to describe the sort of learning undertaken by students who are given a chance to acquire and apply knowledge, skills and feelings in an immediate and relevant setting. Experiential learning thus involves a

'direct encounter with the phenomena being studied rather than merely thinking about the encounter, or only considering the possibility of doing something about it.' (Borzak 1981: 9 quoted in Brookfield 1983). This sort of learning is sponsored by an institution and might be used on training programs for professions such as social work and teaching or in field study programs such as those for social administration or geography courses. The second type of experiential learning is 'education that occurs as a direct participation in the events of life' (Houle 1980: 221). Here learning is not sponsored by some formal educational institution but by people themselves. It is learning that is achieved through reflection upon everyday experience and is the way that most of us do our learning [14]. The type of experiential learning which takes place within this CoP tends toward the latter type described, but can take on the form of the former if a company commander uses the shared "events of life" experiences and replicates them in a training environment for his or her colleagues or subordinates.

Recently, excerpts of the information and discussion areas of the web site have appeared in *Army*, a professional publication of the Association of the United States Army. The information shared includes both explicit information (i.e., checklists and doctrinal information) and experiential information (relating of occurrences and situations to another person or group, with the intent of making others' first exposure to the same or similar situation a positive outcome) which gives both a situation and context, with the intent of explicating tacit knowledge. For example, one excerpt discussed the critical aspects of air-ground integration (the use of either Army aircraft or Air Force assets to support soldiers who are conducting ground-based missions with either intelligence or fire support). The discussion included the standard and doctrinal aspects of employing standard operating procedures, training, rehearsals, and operations plans and orders, but also went far beyond this by providing contextual insights from both pilots and ground commanders. These leaders shared their experiences from a personal perspective that could not be codified without the context within which they were operating. Through the interplay and threaded discussions of the pilots and ground forces, a set of guidelines was formed by a new ground commander or a commander being placed in that situation for the first time [1].

Another facet of the CompanyCommand professional forum is the capability to host professional development opportunities in novel ways. As part of the professional development section related to reading and discussion of pertinent literature, a unit that was preparing to deploy to Afghanistan was able to discuss

and analyze the book, *Taliban* [11], through a participative book review. The senior officer in the unit facilitated on-line threaded discussions, and was able to introduce a leading scholar on Islamic culture into the on-line conversations. This afforded the officers of the unit a fundamental grounding in the culture, history, and language of Afghanistan prior to arrival in-country. One officer summarized this learning as "instead of skimming the book or listening to the speaker and then forgetting about it, we were writing down what we were learning. And because we were reading each other's comments, the team became aware of what others were learning" [6].

Current Status Of Military Professional Development

The traditional curriculum of the Army professional development system has served the force well in the past. Much of this curriculum was developed through a systems analysis process, producing detailed tasks, conditions, and standards. "Systematic training models drive the design, resourcing, execution, and assessment phases of a variety of schools and courses" [12]. This has led to a relatively structured system, with detailed curricula for both on-site and distance learning courses. It appears as though this process will continue as the Army moves forward into Joint training, as the "competency mapping" [12] model will be adopted by Joint Forces Command.

Competency mapping entails the creation of a structured grouping of lists of tasks that form the basis of leader training. These maps/lists are not created in isolation, however, as the Army and other services draw upon practical experiences of current instructors, and rely upon such agencies as the Center for Army Lessons Learned (CALL), which is a data base repository that "gives soldiers condensed information that allows them to cope with combat situations more flexibly and capably" [8]. However, there is some time delay between the recognition of an insight and the posting of the insight to a database.

However, "an overly-detailed list-based approach" [12] could create a problem due to the tradition of professional military schools to teach only the items contained on the list. Reed also questions the relevancy of the listed items, since the lists take years to develop and gain approval from the Military Education Coordinating Council [12]. In consideration of the concern of Reed and others, as well as the fast-moving world political situation, some changes have taken place in the curriculum and curriculum development process at the Command and General Staff College (CGSC).

For many years, CGSC has provided the Command and General Staff Officer's Course, designed for those officers deemed ready to fulfill higher-level command and staff positions. As a result of several analytical studies, including that of the Army Training and Leader Development Panel (ATLDP), the Chief of Staff of the Army directed that CGSC be adapted to better meet the challenges of transformation. So, the Intermediate Level Education (ILE) curriculum was developed to "produce field-grade officers grounded in warfighting doctrine and possessing the technical, tactical, and leadership competencies and skills needed to be successful in their respective career fields into the 21st Century" [16]. The ILE course ensures that all Army majors receive a common-core curriculum (about 3 months), with a follow-on grouping of functional area courses that last approximately seven months [16].

In addition to the course offerings, the institutional philosophy has also begun to change. "The institution has adjusted its approach from training students what to think to focus more on teaching students how to think" [16]. The learning objectives for ILE are stated in an appendix (Appendix C) to *The Chairman of the Joint Chiefs of Staff Instruction on Officer Professional Military Education Policy* (OPMEP) [4]. There are five overall joint learning areas for the ILE course:

- 1) National Military Capabilities, Command Structure and Strategic Guidance
- 2) Joint Doctrine and Concepts
- 3) Joint and Multinational Forces at the Operational Level of War
- 4) Joint Planning and Execution Processes
- 5) Information Operations, Command and Control (C2) and Battlespace Awareness

These learning areas are consistent with the expected level of responsibility for those who attend the course, and provide a foundation for further professional development as an officer's career progresses [4].

Current Status of Communities of Practice

Several sources [2, 3, 7] provide specific insights on how to develop a community of practice, be it local or geographically separated. The main ingredient in each case is a willingness to share insights and experiences to improve oneself or the collective group. The Jet Propulsion Laboratory CoP has continued to evolve as a "self-organizing" [2] CoP, rather than a sponsored one. There has been little competitiveness among members, "as the meetings made it clear that the network was going to be about camaraderie and support - not about individual units' self-interests" [2]. "Online participation not only served as a tool for informal

learning situated in the context of coordinators' [members'] everyday work experience, but also that participation became important in defining the identity of the practice itself. Motivations to participate included an opportunity to learn new skills and work practices, a means of social and professional connection to colleagues, and a mechanism to reduce the isolation that was inherent in the job function and geographical location [members distributed across British Columbia]" [7].

The research described in this paper is part of a larger study that investigated CoPs in terms of their overall contribution to learning in the military environment, with the motivation being a search for a more efficient learning methodology, given the greater mission load placed upon today's soldiers. The overarching hypothesis is that informal learning has a positive effect on formal professional development, to the point where curriculum changes should be considered [13].

METHODOLOGY

Research Problem

Briefly stated, the research problem was to determine whether CoPs can contribute to formal professional development (i.e., next degree or certification level) by allowing participants to become familiar with, or even master, course objectives prior to formal enrollment. Therefore, the survey attempted to validate the roles that current research suggests CoPs play, as well as the potential for CoPs to contribute to formal professional development.

The Instrument

Members of the CompanyCommand.mil professional forum, who were also enrolled in Command and General Staff College (CGSC) or the Intermediate Level Education (ILE) course, were asked to complete a web-based survey to assess how well their informal learning supported specific learning objectives.

The survey, created and offered via a web-based surveying tool called WebSurveyor, began with an introductory paragraph to explain the purpose of the survey, the target audience, and the prerequisites needed to provide valid responses. The authors considered those who were previous or current members of the CompanyCommand professional forum and who have attended either the Command and General Staff College (CGSC) or the Intermediate Level Education (ILE) Course valid respondents. (ILE is an updated, restructured curriculum for the College which was implemented beginning in 2005 – it is

considered to be the same level of difficulty as the original CGSC curriculum.) The survey contained questions in the background and demographics section of the survey to determine if these prerequisites had been fulfilled. The authors used other demographics questions to determine whether respondents were representative of the Army officer profile, such as job specialty, education, and gender. The main body of the survey contained questions related to learning objectives for the CGSC/ILE course, and participants responded to questions related to whether the professional forum provided a foundation for them to understand the learning objective(s).

Instrument Validation

Once constructed, a panel of experts reviewed the survey instrument. The panel included the Army's appointed Chair on Transformation at CGSC; Assistant Director, Concepts and Operations, Forces Transformation and Resources, Undersecretary of Defense, Department of Defense; and a founding member of the CompanyCommand professional forum. They validated the need for the survey approach as well as the questions asked.

Participant Population

The number of members in Army professional forums is more than 70,000 (as of January 2006) across the more than 125 forums that the Army sponsors. The moderator of several of these forums stated that it was difficult to gauge the true number of "participants" in a forum, since some individuals may log on to see only the home page headlines, while others may respond and interact with threaded discussions, pose questions, or download information [9]. Accordingly, determination of an estimate of the population was difficult, but given that the number of members of CompanyCommand when this study was conducted was on the order of 6,200, and the number of CGSC graduates is approximately 1,500 per year, there was a potential population of approximately 4,500 (the forum has been in existence for approximately 3 years), which would serve as the upper bound for the total population. Since the current rank and military education level of the approximate 6,200 members of CompanyCommand [17] is unknown and the number of CGSC graduates who have been members of CompanyCommand is also unknown, the researchers made no attempt to estimate the true population. In order to determine representativeness of the sample of 135 valid responses received, the authors compared the demographics of the respondents related to gender, ethnic background, marital status, and current military status to the 2005 Army Profile [10] to ascertain whether the respondents

as an aggregate were in general alignment with Army Officer demographics, and found that the demographics represented an approximate distribution of the profile.

Data Collection

Data were collected by means of a cross-sectional questionnaire containing 25 items plus 16 demographics questions, and self-administered via an on-line web site, using WebSurveyor. The majority of questions were designed with Likert scale responses, such as, "CompanyCommand is a resource that provides relevant information" [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree], or "Participation in CompanyCommand has allowed me to comprehend the organizational framework within which joint forces are created, employed and sustained" [Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree], and all questions included a comment field to allow for open-ended responses to gain a richer perspective of the quantitative responses. The pertinent responses in this research were scaled from 1 to 5, with 1 equaling "Strongly Disagree" and 5 equaling "Strongly Agree."

RESULTS

Figure 1 provides aggregate mean responses to the questions asked regarding the contribution of CompanyCommand to understanding the formal professional development objectives required by the Joint Chiefs of Staff.

[Insert Figure 1 here]

Questions asked were related to 15 of the 32 total learning objectives. As shown, most aggregate responses were positive (a mean score of greater than 3.00), with the exception of strategic guidance (SG), mean 3.00; joint and multinational forces at the operational level of war (JMFO), mean 2.98; joint planning processes (JPP), mean 2.90; joint execution processes (JEP), mean 2.90; and strategic level of warfighting (SLW), mean 2.85. These results appear reasonable, since the focus of the officer professional development system during the primary phase of education is on the tactical level, and the objectives mentioned above tend toward the operational and strategic levels of war. A detailed description of the specific learning objectives is probably beyond the scope of this paper- the value of describing the aggregate results is to demonstrate the opinions of the respondents with respect to their educational requirements.

A second section of the survey investigated the thoroughness of comprehension of specific learning

objectives within the CGSC/ILE curriculum, as introduced and discussed within the CompanyCommand forum (i.e., these learning objectives could be potentially be satisfied outside the classroom with CompanyCommand as a resource). Figure 2 provides a summary of the aggregate means for questions asked pertaining to these specific learning objectives within the context of the CompanyCommand forum.

[Insert Figure 2 here]

Questions asked related to 14 of a total of approximately 50 learning objectives for the CGSC/ILE curriculum. As shown, most aggregate responses were positive, with the exception of organizational framework of joint force creation, employment, and sustainment (ORGJ), mean 2.96; joint force command relationships for logistics (CMDJ), mean 2.93; interrelationships between joint doctrine and service doctrine (SDJD), mean 2.92; employing joint and multinational forces (JMNO), mean 2.86; and, plan for employment of joint forces (JFOL), mean 2.86.

The researchers conducted analysis of variance with respect to differing subgroups within the response set. No statistically significant relationships were found in the response groups related to branch type (primary type of job within the Army, i.e., infantry, field artillery, logistics, communications), gender, or ethnic background, which appears to validate that opinions related to the level of learning and inherent value gained from use of CompanyCommand are independent of gender, ethnicity, or job type.

To summarize, analysis indicated that the CompanyCommand CoP played a role in assisting officers in their current and future job assignments, as well as further formal professional development. Additionally, the CoP supported several of the learning objectives to a moderate degree. The implications of these findings are discussed in the following section.

POTENTIAL IMPLICATIONS ON GRADUATE EDUCATION

Although some may argue that the military is a somewhat “closed society” insofar as its structured professional development system, this research clearly shows that the military realized the utility of informal social and professional networking, and embraced it. This has resulted in a tremendous sharing of information across the Army in general, as well as a more prepared group of students as they enter their master’s level education. The benefits of this

investment can be far-reaching, as the profession of military officers gains knowledge at a faster rate, and the Command and General Staff College (as well as other military-based professional degree programs) may be able to further modify their curriculum to teach learning objectives to a greater depth and breadth in the same amount of time. CGSC has already begun changing their curriculum in response to the informal learning, and more changes are probable.

The military community has a real need to increase the efficiency of its formal education at all levels, given probable increases in the size of the military over the coming years, as well as the greater diversity of missions in which the military becomes involved. Taking full advantage of the informal learning that is taking place in CoPs may assist in obtaining efficiency gains.

CGSC caters to and exists for the profession of military officers. In the same manner, many colleges and universities exist to produce and support practitioners of varied professions and industries. This bond may be enhanced by further supporting the informal learning opportunities that naturally occur. Some of those opportunities described in this paper include the formation of a community of practice in which those involved in a profession are invited to attend informal gatherings, share knowledge, and support others. The benefits could be as described previously – the participants are exposed to and sometimes may even master learning objectives for their next level of education, allowing for several curriculum modifications. These may include a greater depth or breadth of instruction, additional learning objectives, or a reduced time to obtain a degree. In any case, the hope would be that those who become involved remain involved, which would allow those who have become more proficient to continue to mentor others.

The actual implementation may take several forms, from partnering with a specific industry sector in a geographic region to establish local/regional communities of practice, or it could involve the creation of a virtual, web-based “center of excellence” in a field that could be geographically distributed, similar to the military professional forums described here.

CONCLUSION

This investigation has attempted to provide a view toward finding ways to both increase knowledge within a specific profession, as well as provide a means of increasing enrollment in graduate studies for specific degree programs. As the competition for students intensifies due to an increasingly connected world,

universities must look for opportunities to find common points of interest between their curriculum and industry. When these common points are found, the university must make an effort to understand the needs of the community, and strive to develop or modify a curriculum that meets the needs of the employer and the students (i.e., a curriculum that includes distance learning, computer based training, teleconferencing, and communities of practice). If successful, a strong partnership can be formed, resulting in a productive workforce with strong ties to its educational institutions.

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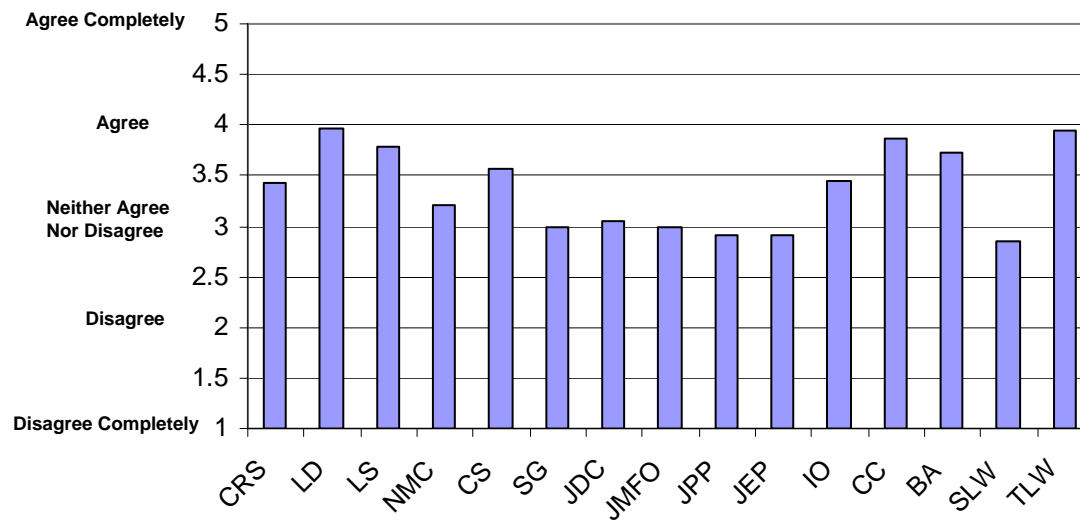


Figure 1. Aggregate mean responses to the contribution of CompanyCommand toward understanding required learning objectives.

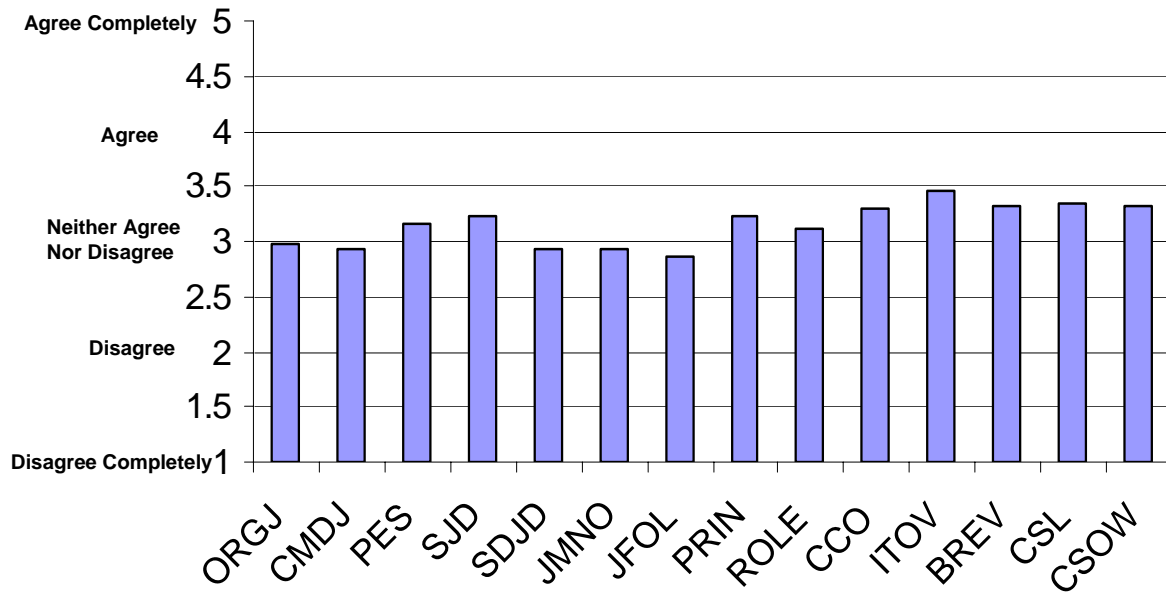


Figure 2. Aggregate mean responses to whether participation in CompanyCommand increased the level of comprehension in areas designated as key learning objectives.