

Exploring cooperative education students' performance and success: A case study

COLLEEN NEVISON

T. JUDENE PRETTI¹

University of Waterloo, Canada

The success of cooperative education programs depends upon the mutual benefit of the student and supervisor. This study looks to investigate how the workplace environment, including the support and the requirements of the role, can impact the performance and productivity of the co-op student, resulting in greater outcomes for both the student and the supervisor. Through a qualitative case study, the experiences of the cooperative education (co-op) student workers were explored within a specific co-op workplace that has consistently produced high levels of student performance. Interviews conducted with the student workers of the workplace of interest revealed useful insight into how student performance can be improved. Emerging themes such as self-determination theory, organizational commitment, and mentorship were explored with the aim of making recommendations that may be applicable across co-op workplaces. A model to describe the findings is proposed. (*Asia-Pacific Journal of Cooperative Education*, 2016, 17(3), 325-335)

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Cooperative education (co-op), a form of work-integrated learning, provides the opportunity for university undergraduate students to engage in multiple work terms of discipline-related employment as a part of their program of study (Groenewald, Drysdale, Johnson, & Chiupka, 2011; Weisz & Smith, 2005). Students are able to learn from their workplace experiences beyond what they might gain from classroom education alone. Furthermore, through co-op, students are able to integrate their experiences in order to increase knowledge, understanding, and create connections between their varying experiences (Groenewald, Drysdale, Chiupka, & Johnson, 2011). That being said, while the workplace offers the potential for a setting in which learning can occur, workplace supervisors often do not have enough understanding of the learning objectives of co-op and do not provide students with meaningful work experiences that contribute to deep learning (Nevison, Drewery, Pretti, & Cormier, 2016). Unfortunately, this means that many co-op supervisors are not taking full advantage of the benefits that can arise from hiring co-op students. Beyond fostering student development and learning, organizations that hire co-op students often save money on recruitment, benefit from short-term employment of productive students, and experience quicker completion of projects (Braunstein & Loken, 2004). As such, more work needs to be done in order to understand how supervisors and students can form a mutually beneficial relationship that results in successful outcomes for both parties.

The current case study looks to address this gap in the research. While some work has been done to understand how co-op workplace environments can impact on students' learning (e.g., McRae, 2015; Subramaniam & Freudenberg, 2007), there remains a lack of insight into how the environment impacts both the performance of the student and benefits the workplace team/organization. Furthermore, little work has been done in order to understand how the co-op supervisor can modify the environment in order to maximize the benefit of hiring students as motivated and skilled short-term labor. Specifically, the outcomes of interest for the employer include productivity and increased performance (Braunstein, Takeji, Wan, & Loken, 2011). In relation to this, the current case study will examine what student workers believe to be pivotal to their performance in the workplace

¹ Corresponding author: Judene Pretti, tjpretti@uwaterloo.ca

through semi-structured interviews. We were particularly interested in how commitment to the organization might be fostered since it has been shown to contribute to regular employee performance (Meyer, Stanley, Herscovitch, Topolnystky, 2002). Within the context of the current study, the researchers chose to focus on in-role and extra-role performance (Bergeron, 2007). In-role performance comprises of activities defined by the job description while extra-role performance involves behaviors that might not be found in the job description but support the organization beyond what is expected (Bergeron, 2007). As such, the purpose of the current study is to examine a particularly productive co-op workplace, in order to better understand the impact of the workplace environment, including support provided and tasks assigned, on student performance and to make recommendations that may be applicable beyond the context of the current case of interest.

DESCRIPTION OF THE CASE

The current case involves an organization that hires co-op students from the University of Waterloo in Canada, in order to support their day-to-day operations. Within the Waterloo cooperative education program, over the course of their undergraduate degree, students complete between four and six work terms that are four months in length. The organization in this case study has been hiring Waterloo co-op students for ten years and has developed a program that appears to provide significant benefit to both the students and the employer. Within the organization of interest, co-op students are hired in either their first or second work term and then remain with the organization for the rest of their remaining work term experiences. The workplace team has evolved into a community of practice with the supervisor and multiple students each term with varying levels of experience.

Over the course of their tenure with this organization, students gain increasing responsibility and freedom in their role. The workplace forms a self-sustaining system where the more senior co-op students train and become a mentor for the junior co-op students. As the junior student progresses, (s)he will eventually be tasked with training incoming junior students. Students' duties as junior students include facilitating day-to-day operations of the workgroup and providing support to senior students' and regular employees' research while senior students have more time to complete research of their own and have greater flexibility in their role. This increase in responsibility and flexibility provides a progression of growth and opportunities for the students.

Beyond the support provided through the community of practice this organization has also fostered a culture of high performance and commitment. These students are self-motivated to work long hours and take work home with them in order to meet deadlines and expectations. For example, if junior students are interested in conducting their own research, this work must be done at home as their work hours are taken up by regular tasks. This expectation has developed into a norm and students recognize it as contributing to their performance and achieving their long-term goals. As a result of their hard work, by the time they graduate with their undergraduate degrees, their names are associated with several published research articles, book chapters, conference presentations, and textbooks. In the ten years that this team has been hiring co-op students, the students have produced over 60 peer-reviewed publications, attended annual conferences, and written and published two textbooks. After completing their undergraduate degree, a vast majority of the students go on to medical school, but some also complete master's programs, or further graduate work.

Many have won national and international awards for their co-op performance and for their research contributions.

This workplace provides an interesting case study for co-op for a couple of reasons. One, the use of a community of practice, which involves senior students mentoring and training junior students and two, because of the consistently high outcomes for the students and the organization. We would like to better understand the factors of this workplace environment that contribute to students' commitment, motivation, and performance.

METHODS

Case studies are common within work-integrated and cooperative education research due to the importance of context within cooperative education programs (Coll & Chapman, 2000; Linn, Howard, & Miller, 2004, McRae, 2014). An instrumental case study approach (Stake, 1995), was used in order to understand the particularities of this unique case and to gain greater insight into understanding of co-op student productivity and learning gained from a work term experience. Through the use of the current case study, it may be possible to refine the current understanding of how supervisors of co-op students can create an environment that is particularly conducive to high job performance and increased learning for the students.

The data collection involved semi-structured interviews with past and current student employees of the co-op workplace of interest (n = 7). These interviews followed a semi-structured format so that researchers could explore experiences further as students mentioned them. Interviews were used so as to provide a clear understanding of the social phenomena at play within the workplace of interest (Gill, Stewart, Treasure, & Chadwick, 2008). Interviews lasted an average of 30 minutes. Transcripts were coded with respect to common themes and potential theoretical processes that might underlie the views expressed by the participants. In particular, an inductive approach was employed in order for the significant themes to emerge even if they were not planned outcomes of interviews (Thomas, 2006). Researchers used a constant comparison method and inductive approach in order to highlight key themes from the data (Thomas, 2006). These key themes will be presented in the findings and discussion.

FINDINGS AND DISCUSSION

Over the course of the interviews, students spoke broadly about their previous experiences within the co-op workplace under investigation. There were a number of common themes that arose from the interviews that were in keeping with previous theories of motivation (Deci & Ryan, 1985), commitment (Meyer & Allen, 1991), and mentorship (Kram & Isabella, 1985; Ostroff & Kozlowski, 1993). These themes will be discussed in relation to student performance within the context of cooperative education. Finally, as a result of the synthesis of these main themes, an explanatory model for possible wider application is proposed.

Motivation and Internalization

Deci and Ryan's (1985) theory of self-determination posits that social context catalyze within and between-person differences in motivation and personal growth. These researchers argue that individuals do not only vary in their level of motivation but also in their type motivation. In other words, there are different types of motivation; namely, intrinsic and extrinsic motivation (Ryan & Deci, 2000). Intrinsic motivation refers to doing something

because the individual finds it inherently enjoyable or interesting (Deci & Ryan, 1985). It is believed that in order to achieve intrinsic motivation, three primary psychological needs must be met, the needs for competence, autonomy, and relatedness. When these three needs are met, individuals tend to be more intrinsically motivated. Furthermore, the perception that these three needs are met can be impacted by social and environmental factors (Ryan & Deci, 2000). Following Cognitive Evaluation Theory (Deci & Ryan, 1985), social contexts can produce a variety of levels of intrinsic motivation. Interpersonal events that conduce feelings of competence can enhance intrinsic motivation when accompanied by a sense of autonomy or internal locus of control (de Charms, 2013). When paired together, increased autonomy and enhanced feelings of competence can result in greater intrinsic motivation (Ryan & Deci, 2000).

These previous findings and theoretical developments are consistent with that highlighted by participants in interviews. Students often mentioned feeling trusted by their supervisor due to the large amount of responsibility given to them from the start. This may have led to them feeling confident in their abilities in the workplace. One student particularly highlighted the importance of this by stating, “[The supervisor] expected a lot from us even though we were just students. That meant a lot because you knew someone was trusting in the work you were doing and saw that you could actually contribute to something”.

It might be the case that by ensuring that students felt competent and autonomous, the supervisor was able to improve students' intrinsic motivation which has been shown to lead to increased performance in the classroom (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004), and in the workplace (Baard, Deci, & Ryan, 2004; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). Consistent with these findings, the current students demonstrate high levels of performance while on their cooperative education work terms. Evidence of their motivation was noted in the students' descriptions of welcoming extra work and continuing to contribute to the organization through work completed after hours. This included the analysis of data, drafting of manuscripts, and creation of new research protocol. The environment created by the supervisor and greater organization may play a role in the performance and motivation of employees, including co-op student employees. Providing students with a sense of autonomy and a perception of competence within their role may result in greater intrinsic motivation and, in turn, increased job performance.

Commitment

The students interviewed within the context of this case study chose to return to their organization for the entirety of their work term opportunities, demonstrating a significant commitment to the organization and their work group. Additionally, the students continue to remain in contact with those in the work group even after they have moved on to medical school, or grad school, supporting the current students by attending presentations while not on work term and by sharing their experiences of medical school preparation to improve new students' chances of being admitted. Meyer and Allen (1991) argue that commitment is a psychological state that is made up of three components: affective commitment, continuance commitment, and normative commitment. Commitment has been linked to lower turnover rate, (Meyer & Allen, 1991) which we posit is analogous to a student's choice to return to an organization for multiple work terms.

Affective commitment refers to an employee's emotional attachment to, identification with, and involvement in the organization. This is impacted by personal characteristics, job

characteristics, and work experiences. In other words, affective commitment is a desire to remain with an organization. Within the context of the current case study, participants mentioned that their experiences in their initial work term led them to want to return for subsequent work terms. One student stated:

I think it's very different than the other co-op experience that I had and that's why I stayed because the experience you're getting is just so broad [...] the other co-op was what they needed you to do and this is more like what I want to do

Continuance commitment refers to an awareness of the costs associated with leaving the organization. Antecedents to this type of commitment include investments within the organization, and the availability of alternatives. Continuance commitment is particularly important because without recognition of the costs associated with discontinuing an activity, there cannot be a sense of commitment (Meyer & Allen, 1991). For students in the current workplace of interest, they felt that there was no better alternative to meet their needs. One participant highlighted this by saying: "After my first term I was like, 'I don't think there's a better place or a better co-op job to have where I would be getting the kind of experience that I wanted to get.'"

Finally, normative commitment reflects a feeling of obligation to continue employment. It may be the case that students felt an obligation to return for multiple work terms as it has been established as a norm in the past. When discussing their interview experience, all the students mentioned that the supervisor asked whether they would be willing to return for multiple work terms. As such, it may be that the norm of returning for multiple work terms is established early. Furthermore, participants mentioned seeing presentations from senior students before their interview explaining the expectations of the workplace. One student highlighted this, saying: "They had their current students give a presentation about the overview of the [team] and what the opportunities that other students had had".

By demonstrating to potential incoming students the benefits of completing all of their work terms with the team, and demonstrating that a vast number of the current students will complete all of their work terms there, there may be a norm established and students may feel as though they have an obligation to complete all of their work terms with the team. That being said, it appears as though continuance and affective commitment play a much larger role within the context of the current case study. Students report that they want and need to return for multiple work terms. More than that, students appear to be happy to return for each subsequent work term.

This sense of commitment may also be impacted by students' motivation as developed by their workplace experiences. Previous research has demonstrated that those with greater intrinsic motivation are more likely to have higher levels of organizational commitment (Crewson, 1997). Those who are intrinsically motivated are likely to identify more with their organization and are more actively involved (Moon, 2005). Mathieu and Zajac also demonstrated a correlation between intrinsic motivation and organizational commitment (1990). It remains unclear whether there is a causal relationship between these two concepts but the current research demonstrates that they may occur together and may impact one another. The attitudes and actions of the participants in the current study appear consistent with the theory that those who are highly committed also exert high levels of energy on behalf of their organization (Mathieu & Zajac, 1990).

Mentorship

A key component of the workplace of interest was the prominence of mentorship. Establishing mentor-mentee roles is seen in multiple forms within the context of the current workplace. Firstly, we will examine the use of mentorship in early socialization of newcomers and establishment of commitment. Student newcomers in the current case reported two main mentorship relationships: their supervisor and the senior students. Research has demonstrated that mentoring plays a significant role in the very early stages of an individual's career and can be used to socialize new employees (Noe, 1991). In fact, mentoring has been posited to have the largest impact on newcomers (Ostroff & Kozlowski, 1993). Within the workplace of interest, the supervisor has worked to remove typical barriers to newcomers taking full advantage of mentor-mentee relationships. New, potential mentees often do not want to appear unknowledgeable and are reluctant to turn to others for information (Heimann & Pittenger, 1996). This appears to not be an issue in the current workplace. Students are encouraged to ask questions and spend at least the first three weeks of their initial work term shadowing a senior student in order to learn.

Eby and colleagues (2013) demonstrated that peer mentoring is particularly effective in creating mentee satisfaction due to the support and sense of affiliation provided by the mentor. Kram and Isabella (1985) highlighted that peer-mentoring relationships require reciprocity in order for such relationships to be successful. One student within the current case described the mentor-mentee relationship between themselves and the senior student as a "symbiotic relationship where [they're] both benefitting". The junior student receives coaching and an introduction into the role and the senior student experiences a lighter load as the junior student takes on more responsibilities. Students mentioned the value of having a senior student as a mentor because they felt comfortable asking questions of someone closer to their age:

I actually like having her with me because I feel like that's extra support and I feel like, [...], you might be intimidated or a little embarrassed to ask [supervisor] some question but I feel completely comfortable asking or running to [name] for help. Which I actually really appreciate so she helped me out a lot in the first month.

Generally speaking, peer mentors are viewed as more accessible and provide greater empathy to the newcomer, offering emotional support on a day-to-day basis (Ensher, Thomas, & Murphy, 2001). Another student stated their support for this type of mentoring relationship due to the similarity between the mentor and mentee in this context stating, "I fully advocate the senior student training the junior student because I feel like that gives you a basis to relate to as opposed to, like, [supervisor] because you might get intimidated".

Within the current case study, the students mention the role their supervisor plays as a mentor, particularly as they became more experienced in the workplace. The supervisor represented a much more traditional form of mentor, sometimes referred to as the "godfather" role for the mentee (Hunt & Michael, 1983). According to the students, the supervisor played a relatively small role in the students' work term experience during the first work term but became more involved as a mentor when the student returned for subsequent work terms. This may be an unconscious cost-benefit analysis for the supervisor. Previous research has demonstrated that supervisors are more willing to take on the role of mentor for those who are higher performers as they anticipate higher rewards (Olian, Carroll, & Giannantonio, 1993; Green & Bauer, 1995). By observing students and having

them return for multiple work terms, the supervisor can see that the students are high performers and, as a result, the supervisor begins to take on a larger role as a mentor within the students' experiences. This follows social exchange theory, which states that individuals form, maintain, or end relationships on the basis of the perceived benefits and costs of the relationship (Emerson, 1981). For the supervisor in the current case study, it may be that once the benefits to investing in a student are clear, he begins to provide more explicit mentorship. One student highlighted this development of their relationship by saying, "I think my supervisor became more of a mentor to me and he provided advice for career development. As time went on, he was less focused on the existing work term".

This development of the relationship between the supervisor and his students is valued by each student. He provides them with greater opportunities to clarify their career aspirations and helps each student to meet their individual career goals. One student described the relationship between them and their supervisor as follows, "I feel like he's not just a boss, he's a mentor, he's very interested in your success, and he'll help you with whatever goals you have."

Another student said this when asked about their relationship with the supervisor, "I would describe [the supervisor] as my mentor and I always say this but I don't believe I would be where I am right now if I didn't have that mentor and my relationship with him".

Previous research has demonstrated the positive career outcomes that are observed as a result of positive mentor-mentee relationships. When partnered with an effective mentor, mentees demonstrate better socialization, and faster promotion (Dreher & Cox, 1996; Turban & Dougherty, 1994; Whitely & Coetsier, 1993). Furthermore, both formal and informal mentoring relationships had an impact upon the role of career-related support in increasing job satisfaction (Chao, Walz, & Gardner, 1992). The current case study appears to replicate these findings as students interviewed highlighted the importance of both mentoring relationships in their success on the job over the course of their work terms.

Proposed Model

Aligned with the work of Lave and Wenger (1991), the organization of interest in this case study has created a community through which individuals learn from each other, share information, and are able to develop their personal and professional skills. By having students return for multiple work terms, they move from newcomer towards a more experienced member of the community, developing their relationships over time (Lave & Wenger, 1991; 1998). The students and other members of the organization generate a shared knowledge of ideas, expectations, and commitments. This may lead to increased performance for the students as together they are able to undertake more complex activities through cooperation and collaboration.

Based upon the results of the data analysis from the current study and previous work on community of practice and peripheral participation (Lave & Wenger, 1991; 1998), a model has been developed to depict the way in which students in this case study develop greater levels of intrinsic motivation, commitment, and performance through the processes in place in the workplace. This model is a culmination of the interviews conducted with student participants and a review of the literature. We believe that this model may be applicable outside of the current case study and used to harness greater student development and performance across different co-op workplaces; however, further evaluation of the model is required.

We propose that what is happening is by adequately socializing and training students and building a mentoring relationship between the junior and senior students, providing them with a sense of competence and allowing them greater autonomy over their role, intrinsic motivation is enhanced. This motivation will, along with their workplace experiences, have the potential to influence their levels of commitment to the organization. Their commitment to the organization results in the student becoming more senior and taking on the role of the mentor with the new students. This creates a self-sustaining cycle of high quality co-op experiences for both the students (junior and senior) and the supervisor. This is summarized in Figure 1.

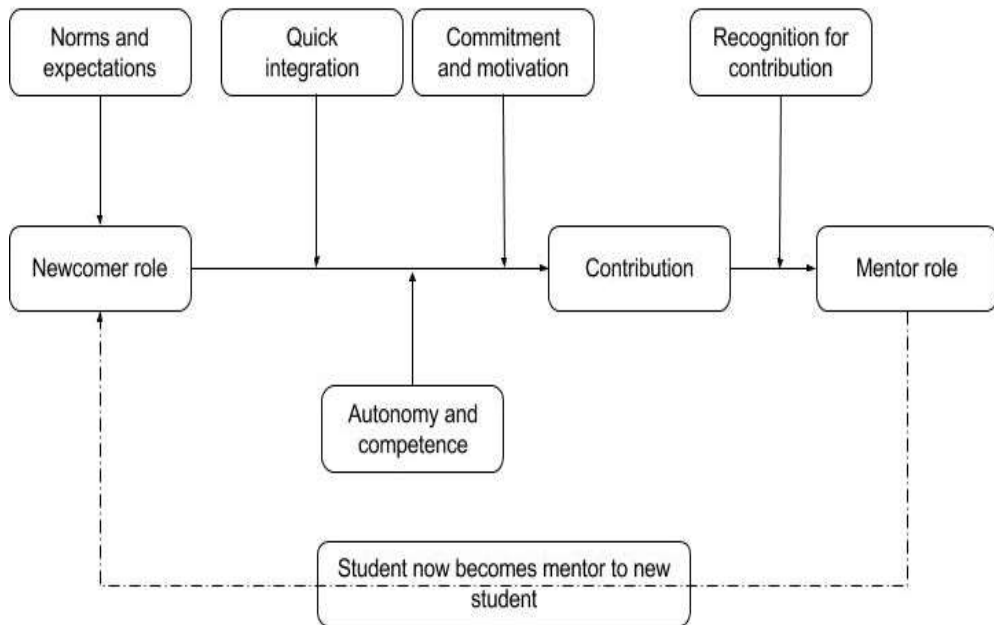


FIGURE 1: A visual representation of the self-sustaining system developed by the workplace in this case study

CONCLUSION AND IMPLICATIONS FOR PRACTICE

The success of cooperative education programs depends upon mutual benefit for the student and the co-op supervisor. Within the context of the current case, it appears that students and supervisor benefit when students are provided with adequate training and an environment in which they can succeed. The cyclical nature of the organization's training program reduces the investment of time required by the supervisor and may be important in fostering a sense of mentorship between the senior and junior students. Furthermore, by providing students with autonomy and a sense of competence, they may become more intrinsically motivated and committed to the organization, choosing to exert greater effort for their organization and workgroup.

The authors believe that these findings have the potential to be applied beyond the context of the current organization. In particular, supervisors of other co-op students should look to employ a similar training program by having a senior student and junior student pairing for each work term. If this is not possible, then having a week overlap between an exiting and

an incoming co-op student for training might also reduce the amount of time the supervisor needs to spend training students. Furthermore, supervisors should look to empower their co-op student employees by providing them with greater autonomy within their role with the goal of supporting the development of self-efficacy in the students (see Spreitzer, 1995; 1996). Following the norm of reciprocity (Gouldner, 1960), students will return this investment by demonstrating increased motivation and commitment to the workgroup and the greater organization. This current case potentially provides greater insight into how commitment can be developed within a short period of time, specifically the four-month work term length. By demonstrating early on that commitment is expected and providing students with benefits within the workplace, this may foster greater commitment in the student. One way of doing this might be to increase the student's responsibility as they demonstrate competence in their role. Students may feel more committed when his/her supervisor provides them with more responsibility.

LIMITATIONS AND FUTURE RESEARCH

This paper has focused on the perspectives of students who were members of a workplace that fosters performance and development. Further work is required in order to understand the perspective of the supervisor, as well as how the insights provided by students might apply across multiple contexts. Research is needed to evaluate the applicability of the strategies that have been identified through the current research to other workplaces.

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About the Journal

The Asia-Pacific Journal of Cooperative Education publishes peer-reviewed original research, topical issues, and best practice articles from throughout the world dealing with Cooperative Education (Co-op) and Work-Integrated Learning/Education (WIL).

In this Journal, Co-op/WIL is defined as an educational approach that uses relevant work-based projects that form an integrated and assessed part of an academic program of study (e.g., work placements, internships, practicum). These programs should have clear linkages with, or add to, the knowledge and skill base of the academic program. These programs can be described by a variety of names, such as cooperative and work-integrated education, work-based learning, workplace learning, professional training, industry-based learning, engaged industry learning, career and technical education, internships, experiential education, experiential learning, vocational education and training, fieldwork education, and service learning.

The Journal's main aim is to allow specialists working in these areas to disseminate their findings and share their knowledge for the benefit of institutions, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that will lead to the advancement of effective practices, development of further understanding of co-op/WIL, and promote further research.

Submitting Manuscripts

Before submitting a manuscript, please ensure that the 'instructions for authors' has been followed (www.apjce.org/instructions-for-authors). All manuscripts are to be submitted for blind review directly to the Editor-in-Chief (editor@apjce.org) by way of email attachment. All submissions of manuscripts must be in Microsoft Word format, with manuscript word counts between 3,000 and 5,000 words (excluding references).

All manuscripts, if deemed relevant to the Journal's audience, will be double-blind reviewed by two or more reviewers. Manuscripts submitted to the Journal with authors names included will have the authors' names removed by the Editor-in-Chief before being reviewed to ensure anonymity.

Typically, authors receive the reviewers' comments about 1.5 months after the submission of the manuscript. The Journal uses a constructive process for review and preparation of the manuscript, and encourages its reviewers to give supportive and extensive feedback on the requirements for improving the manuscript as well as guidance on how to make the amendments.

If the manuscript is deemed acceptable for publication, and reviewers' comments have been satisfactorily addressed, the manuscript is prepared for publication by the Copy Editor. The Copy Editor may correspond with the authors to check details, if required. Final publication is by discretion of the Editor-in-Chief. Final published form of the manuscript is via the Journal website (www.apjce.org), authors will be notified and sent a PDF copy of the final manuscript. There is no charge for publishing in APJCE and the Journal allows free open access for its readers.

Types of Manuscripts Sought by the Journal

Types of manuscripts the Journal accepts are primarily of two forms; *research reports* describing research into aspects of Cooperative Education and Work Integrated Learning/Education, and *topical discussion* articles that review relevant literature and give critical explorative discussion around a topical issue.

The Journal does also accept *best practice* papers but only if it present a unique or innovative practice of a Co-op/WIL program that is likely to be of interest to the broader Co-op/WIL community. The Journal also accepts a limited number of *Book Reviews* of relevant and recently published books.

Research reports should contain; an introduction that describes relevant literature and sets the context of the inquiry, a description and justification for the methodology employed, a description of the research findings-tabulated as appropriate, a discussion of the importance of the findings including their significance for practitioners, and a conclusion preferably incorporating suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical discussion of the importance of the issues, and implications for other researchers and practitioners.



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