What knowledge is most worthwhile in IS work placements?

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What knowledge is most worthwhile in IS work placements?

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Abstract
A case study conducted across a cross-section of stakeholders involved in a year-long co-operative education (co-op) program within an IS business degree in an Australian university, uncovered a range of views of what knowledge was perceived as most worthwhile. This paper discusses these findings drawing on a multidisciplinary review of a wide range of research literature. It is proposed that the diversity of individual views promotes a broader spectrum of worthwhile knowledge that suggests universities recognise the different individual values in the design and delivery of courses and programs so as to provide students with richer, more satisfying learning experiences.

Keywords
Generic skills, employability skills, professional development, work placements, practical knowledge.

INTRODUCTION
Innovative and efficient use of information communication technologies (ICT) has been identified as a major driver of economic growth and productivity (OECD 2006). In order to build and maintain a sustainable and world-class ICT workforce, Australia needs to enhance its level of ICT skills and capability (DCITA 2006). However, the constantly evolving technologies have ongoing implications for skills demand. Unlike other sectors, ICT is continually leading and adjusting to technological developments. This change impacts on the demand for skills in the sector with some becoming obsolete while others grow rapidly (Multimedia Victoria 2009).

Businesses and governments look to educational institutions to prepare individuals that are job-ready and have the ability to grow in the constantly changing workplace. However, research evidence suggests knowledge gained in the classroom does not become usable at work without further learning in the workplace (Eraut 2002). Consequently universities offer a range of work-integrated learning (WIL) programs such as work-based projects, traineeships, internships and co-operative education or “sandwich year” programs that bring together universities and work organisations to create new learning opportunities for students in the workplaces.

Are the changing needs of the ICT industry being captured and met through WIL programs offered by universities? Are students gaining and developing the necessary knowledge and skill set to become employable on graduation? How can university programs be improved in developing ICT professionals? Who should be involved and how?

A study was conducted to explore the extent to which a year-long co-operative education program developed the required employability skills to meet the changing needs of the ICT Industry. This paper seeks to present and discuss some of these findings drawing on research literature from across the fields of adult learning, workplace learning, professional formation and co-operative education, higher education and work integrated learning, for the purpose of providing direction in the design and delivery of “worthwhile” university courses.

RESEARCH METHODOLOGY
The setting for the study was an undergraduate information systems degree within the Business College at RMIT University in Australia. The 4-year program includes a mandatory 40 week paid co-op work placement in the 3rd year. At any one time there are approximately 120 students working in a co-op placement. Work placements are found across a wide range of IT job, within a diverse range of small, medium and large business across the full range of industry sectors. A number of people across the academy, industry and governments are implicitly or explicitly involved within this Program.

A single case study approach was used to gather insights from multiple sources (a diverse sample of stakeholders), representative of a wider population (anyone directly/indirectly involved in the co-op program within the IS degree). An inductive research design was selected and qualitative methods used to capture
stakeholders’ experiences and perspectives. The overarching epistemology for this study was interpretive since the social reality of the co-op workplace setting is continuously socially constructed and reconstructed by the individuals. Individuals bring with them their own complex set of beliefs, values, attitudes, motivations, biases and perceptions - their world-views. A person interprets reality through his/her world-view.

Twenty-six in-depth, one and half hour, semi-structured interviews were conducted with a cross-section of stakeholders (academics, industry people, students and alumni) involved directly and indirectly in the co-op program to uncover their views of individual needs, expectations and actual outcomes. The semi-structured nature of the interviews offered opportunities for unexpected insights to be gained as well as encouraging participants to speak in their own voices and elaborate on responses. All interviews were recorded and fully transcribed for further analysis. Interview transcripts were analysed through a number of readings of the transcripts and systematic processes of coding and categorising data to identify emerging patterns and themes. The semi-structured nature of the interviews allowed for individuals to delve into areas of personal interest and concern. Consequently an analysis of the transcripts saw particular attention given to some topics that were ignored in others. However, a common theme emerging from all the transcripts saw discussions around what knowledge gained during a work placement was considered the most worthwhile. Yet even though all the stakeholders agreed there was a great deal of worthwhile knowledge to be gained from working within the co-op placement, there were differences of opinion as to which knowledge areas were considered the most worthwhile, how these knowledge areas were developed and who was responsible for their development.

FINDINGS

Most academics saw the work placement as the opportunity for students to apply their university-learnt IT knowledge and skills and build on their existing knowledge base. However further into the interviews they acknowledged IT skills were not enough and socio-personal skills required consideration. Students and alumni placed most value on the knowledge and skills development that helped them to fit quickly into the workplace. Industry respondents expected students to have a set of IT and socio-personal skills and knowledge and felt the practical “know how” and skills students gained in situ of greatest value. Of interest was the diversity of views as to how the various types of worthwhile knowledge is created.

IT knowledge and skills

The academics placed great store on front-loading students with a solid foundation of IT knowledge and basic skills they could then draw on during their Co-op year:

> It’s better to have that (IT knowledge) upfront because then everything else builds on that (Nick, academic).

Further analysis of academics’ responses also found different perceptions on how knowledge is built. Nick saw knowledge as a series of building blocks, one block building on to another:

> I’m really just talking about the basic conceptual building blocks that IT is about, which we really teach them first year...the basic concepts that never change.

Another academic saw knowledge as a series of inter-linked business and computer systems:

> They need to understand systems... Meaning how systems work, how businesses operate, the nuts and bolts of how business works. How do you program, I think they need to understand how computers work, and...how networks operate. So it’s basically systems, it’s the applications development, the infrastructure upon which these applications live; they’re the key things (Vlad).

Yet another academic spoke of knowledge involved in solving problems (with technology) for people located in an organisational context:

> We teach technology as a solution for business problems...the students see things like politics in organisations and organisational structure and organisational architecture as being as significant to the solution of a problem, using technology as the technology itself (Dave).

Students saw knowledge as worthwhile in terms of being “useful”. Previously learnt IT skills and knowledge are elevated as having some value when used to complete tasks in the work context:
It’s not until you start working and you’re in an office and people are using the words around you that it triggers and it all makes sense. And you start using it in the real world and you realise it’s not just something you had to remember when you answered it on an exam paper. I can’t put a value on it, that kind of knowledge (Rae, student).

Of value to students was the new IT knowledge and skills acquired through working:

I’ve learned how to debug a lot better, that’s probably one of the main things I didn’t get exposed to enough at uni (George, student).

Employers acknowledged the IT skills and knowledge gained at the University gave students a good foundation for work however, it is not sufficient. Additional IT training and practice was usually required for students to be able to do their jobs:

Even somebody that comes to us with technical skills in the programming languages we use will take a year to come up to speed with our application …there’s still a large learning curve required before we see them as contributors to the business (Mike).

The development of IT knowledge and skills during the placement is dependent on the job the student takes on. Some jobs are more technically focused, drawing on a specific knowledge base:

[Knowledge gained is] highly depending on what role they had in Co-op. Some are developers and spend the whole time doing that, some of the others are doing networking and do more programming and analysis (Nick, academic).

Most of the respondents commented, or acknowledged, that knowing how to communicate and work with people was essential

I think what this all comes down to is not the hard skills, it’s not the technical stuff, it’s the soft skills, people skills, communication (Scott, alumni).

Socio-personal knowledge

As most of the work placement jobs in this degree require students to work in client-facing roles, excellent interpersonal communication skills are considered essential by individuals in industry and the IT profession:

That’s my general main beef. I see some really clever people, technically brilliant people but they don’t know how to put together some basic written communication in what I would call an acceptable form that could be put in front of a customer (Harry, IT Profession representative).

Academic respondents spoke of the knowledge of soft skills best being developed through immersion in the work context:

What we do in the classroom environment is not effective as what it is in Co-op, so where they really learn to be part of a team and to talk to the boss and all the things that are really important communication skills, they really learn them in their Co-op (Dave).

He added that there is a general lack of understanding among academics as to how soft skills are developed: “nobody knows what it is”. There are attempts to explicitly teach the theory behind communication and teamwork that fall short of application:

And they may have some theory about roles but they don’t try to transfer that theory into any sort of meaningful practice (Dave).

Students spoke of soft skills as the means by which one fitted into a workplace. Most talked of being keen to adjust to the work context in terms of appropriate behaviour, language and work practices.

You need to really get on with other employees. I think that’s one of the main skills...you need to be more sensitive to the people around you. Everyone’s got a different personality so you just learn how to communicate with people. I think maybe that’s something you can’t learn by studying at
university, that’s something you learn by being part of different clubs ... talking to other people (George, student).

Alumni spoke retrospectively of the value of a number of university courses focused on the team and communication development that seemed trivial at the time:

To me organisational behaviour is a really important part of business life, but kids at uni don’t pay attention to it, they think it’s a wank, and it’s not a wank. It’s very important to understand the dynamics between people and the way that people work with each other (Pete, manager & alumni).

All agreed the workplace provided a forum to develop a student’s interpersonal skills and personal attributes. However soft skills are not developed in isolation but honed in the context of doing and completing tasks to deadlines and budgets within a practical situation.

**Practical knowledge**

In general stakeholder groups differed in how they thought practical knowledge (“know how”) was developed. In general academics spoke of practical knowledge in terms of getting a job done; students as knowing what to do; while alumni and employers spoke of practical knowledge as having the “know how” to read a situation and respond appropriately.

Most academics saw developing practical knowledge as transferring, using or adjusting existing knowledge and skills to the job at hand:

[It is] the ability to understand how to apply familiar skills in unfamiliar circumstances, which often requires some degree of adjusting those skills, some adjustments to what we’ve learnt from our books (Barry, University management).

Students spoke of knowing what to do to meet expectations:

I can see the kind of standard he expects, like the standard he expected from me at the beginning is not the standard he expects from me now (George).

And of needing to know how they measure up:

Whenever I meet with my manager, I’m always asking for feedback. So if I’m doing something wrong, I want to know about it. So in that sense, I feel like I’m doing a good job (Rae).

Industry spoke of practical “know how” as knowing how to deal with and adapting to each different situation. Knowing how to get the job done means developing an awareness that tasks are more complex than those presented in the classroom. Tasks are inter-related and subsets of other tasks. One employer spoke of the importance of seeing tasks within its context:

An overall awareness that it’s not down at task level but above...the task has got related activities...may be part of sub-projects within projects. Different projects fit within programs...big picture view (Charles).

He added that the volatile nature of the workplace increased the complexity of tasks:

[Going] from [a] learning institution to a working environment, the tasks [are] more complicated not that they are harder because more people are involved. In the learning environment you have a task to do, a problem to do. You work singularly or in teams and by and large the goal posts don’t move. The work environment is not black and white, budgets are cut. Times change. Parameters change. People change. Projects go longer.

Knowing how to handle such complexity using time and people management skills was mentioned by all students and industry respondents. It consists, for example in:

...the capacity to organise priorities, to deal with competing priorities and to prioritise them in ways that will get everything done (Mike).
Most employers and alumni spoke of students having to develop “street smarts”, being able to “read” a situation and behave and act accordingly. They should:

... sit face to face with the end users and listen to their issues and indeed their objections and to be able to handle those and guide people down the right paths, and indeed to be able to say no to people (Mike, employer).

It was considered important that they be able to manage stressful situations:

How you actually survive in the political in the workplace, how you actually handle the stress and the political war kind of thing, political conflict, personal conflict. That’s some experience that you will never learn off the book (Henry, international alumni).

And have suitable mechanisms to cope with difficult situations:

Where they maybe don’t know what they’re doing [by either] having a go first or asking their manager, the coping mechanism (Scott, alumni).

However there is much that is unfamiliar and new. Knowing how and where to find the necessary resources to find answers to questions was considered by all to be essential.

Some students drew on material from past university courses:

I use a lot of my text books and my lecture notes, especially with programming because the notes were quite extensive which was really helpful (Rae, student).

Own personal independent research:

Google is fantastic, Google is everyone’s best friend (Rae, student).

Doing the tasks:

I’m probably just not a studious sort of person and I find things out for myself, so I learn from my experience rather than going and learning from a book (Pete, alumni).

Learning from mistakes:

You can make a mistake and you seek instruction as to how not to do it again, but if you make the same mistake again after having had that instruction, then management have a perception that you don’t get it, and that is a very difficult perception, it’s a very difficult thing to turn around (Scott, alumni).

Learning from others:

I ask my manager for any hints, people around me, you wouldn’t believe the amount of knowledge my work colleagues have, so they will know everything and anything and even things you wouldn’t think they know, they know. So you just ask questions (Rae, student).

What knowledge is considered most worthwhile to the respondents appears to be dependent on their role (academic, worker, learner), previous work experiences (stage in professional development), background (educational, cultural, family) and personality. The organisational context and culture also plays a part.

In the next section these findings are discussed with reference to the research literature across a number of fields including education, professional development and workplace learning.

DISCUSSION

“A coded recipe ... only attains meaning in a human context” (Bates, 2004, p.11).

The workplace context has the potential to develop a wide range of working, professional and personal knowledge. However to the interview question as to what knowledge gained through co-op they considered most
worthwhile, responses across the stakeholder groups were varied. Broadly speaking teaching academics valued the acquisition and utilisation of IT knowledge and skills most (knowledge/skills-based focus); workplace supervisors the practical knowledge that got the job done well (activity-based focus); while students and alumni found most valuable the oral communications, interpersonal and business skills that gave them the ability to survive the first few months and become contributing members of their respective organisations (individual-based focus).

Crebert et al. (2004) attributed different stakeholder interests were influenced by local and context-bound interpretations. Organisations’ first priorities are usually not around learning even though this is acknowledged as being critical to economic success (Evans et al. 2006). Universities on the other hand are in the business of education (Boud and Solomon 2003) “to assist individuals to be effective in their lives outside of and beyond educational programs and institutions” (p.1, Billett, 2006). However, the range of responses presents a broader definition of learning involving: in, through and for the workplace (Evans et al. 2006) that moves the focus beyond employability to life-long learning.

The study found that what knowledge was most valued had implications for how teaching academics designed and delivered course material before and after co-op and how workplace supervisors inducted and supported students during the co-op placements. These approaches in turn had consequences for how the student approached, survived and grew during their placement year.

Academics in the study promoted the importance of front-loading students with IT knowledge and skills in preparation for their co-op year: “It’s better to have that (IT knowledge) upfront because then everything else builds on that”. Any approaches to include generic skills development in courses was strongly resisted as its inclusion was seen as replacing more important IT-specific course content. Generic skills development was assumed the domain of the workplaces, which is contrary to Beckett and Hager (2002) and Hager (2006) that promoted the development of generic skills though participation in a variety of social, educational and work contexts.

The academics interviewed regarded technically-oriented co-op jobs most highly. Conversely, jobs that were less technically oriented and more client-facing were considered inferior despite the fact that students may have developed socially, personally and professionally. This view was reinforced with the expectation that students returning from Co-op would have a high level of technical knowledge. Where this was not the case the Co-op experience for the student was considered a failure.

The high regard for propositional knowledge is evident across the educational literature and echoed at the lower levels of the Skills Framework developed by the IT industry to assist organisations employing IT professionals (SFIA 2005). A comprehensive set of skills is presented in categories and subcategories and defined through seven levels of competency (from entrant to strategist). The ACS (2008) accreditation documentation draws extensively on the SFIA “to provide a framework of ICT Building Blocks” (p. 23) of requisite skills/knowledge for an ICT professional. Policy documents continue to support the notion that knowledge is an identifiable entity which can be reduced to discrete components and once learnt the knower has the capacity to adapt that knowledge to the situation at hand and make the necessary decisions and adjustments to then complete that task (Hager 2006). However, workplace supervisors, students and alumni confirmed Te Waita’s findings (2006) that the skills and knowledge developed in university settings were not the same as workplace useful skills. Employers in the study spoke of students having to be trained or re-trained and given time to develop the necessary knowledge and skills required to carry out their jobs.

Fenton-O’Creevy (2007) and others argue that higher education practices create barriers to students developing ways of knowing. The view of skills and knowledge as discrete entities that can be acquired and transferred singularly, propagate the notion of the mind-as a-container metaphor and the ‘folk theory’ of learning (Bereiter 2002). Eraut (2002), Hager (2006) and others refute that simple transfers can occur, as such views omit the crucial relevance of learning as a consequence of changing contexts. Each context holds a different set of tasks, people and expectations so the learning experiences will also be different.

Talking to the teaching academics in the sample it was found a variety of teaching approaches and methods used in the delivery of course material. These could be linked to the academics’ previous educational and working experiences. For example one academic with a computer science degree and a highly technical working background delivered content using the traditional approach of delivering lectures, setting practice exercises and setting assessment based on written exams and assignments. This observation links to some research literature where learning was seen as an individual activity that sought to accumulate learning products (Hager 2006).
Another academic with an extensive educational background in mathematics in secondary schools took a problem-solving approach to course design and delivery. Class notes and exercises were written around a variety of real-life case studies and worked on in student-managed teams. The development of oral communications and team working skills were embedded in the design of the tutorial exercises. Both formative and normative assessment tasks were evident. His pedagogy acknowledged the holistic, social, on-going nature of learning promoted by Hager (2006), Beckett and Hager (2002), DEST (2007) and others. However, he admitted he spent little time making explicit the generic attributes students were developing. Hager and Holland (2006) note that leaving such learning implicit, prevents significant learning and development of those attributes. These two approaches highlight the impact of different worldviews on pedagogy practices.

Features of the second academic’s learning environment align with de Corte’s (1996) powerful learning environments that enable formal, informal, intentional and non-intentional learning (Beckett and Hager 2002). However the research literature highlights a history of resistance to acknowledging informal learning within higher education and not legitimising learning outside of school (Billett 2007). Hager and Halliday (2006) observe the push to locate formal learning as a public concern within educational institutions and informal learning as a private one. However informal learning can happen anywhere and separation is not helpful to the development the individual learner.

Workplace supervisors’ expectations of the knowledge and skill level of incoming students were found to be local and context-specific. Where students were employed on a once-off project-basis, workplace supervisors wanted the students “to be able to hit the ground running” with the necessary skills, knowledge, experiences and dispositions. Where the employment of the student was part of a long-term recruitment strategy for the company, supervisors were prepared to build student capacities over a longer period of time. Employers assumed students had basic IT knowledge but commented that it was not enough. A well-developed set of interpersonal skills was considered essential for adapting quickly to the company’s culture together with the ability to learn quickly. Crebert et al. (2004) similarly found employers wanted graduates who were ‘less theoretical’, and had the abilities to communicate with others and understand instructions. Experienced workplace supervisors held little expectations of the student’s productivity for at least the first 4 months; however they were pleasantly surprised when some students did “fit in” quicker and attributed it to previous work experiences, confidence, a “can do” attitude and the personal motivations. Evans, Kersh and Sakamoto (2004) in Hager and Halliday (2006) found gaining tacit knowledge becomes pivotal to learning in new and unfamiliar environments. As Gonzi (2004) points out

What makes people competent, resourceful, adroit (i.e. what makes them knowledgeable) is largely tacit, instinctive, intuitive difficult to pin down and certainly can’t be located in objects stored in the mind (Gonzi, 2004 p.30).

One supervisor emphasised the importance of being able to “read a situation” aligning with Hinchliffe (2006) in Hager & Holland (2006) who found the ability to engage in situational learning, the capacity to ‘read’ situations accurately and sensitively.

Co-op places learners in a central role (Furco 1996 in Billett 2007), yet traditional classroom teaching approaches see educators controlling the students’ learning to produce passive learners (Hager and Holland, 2006). A number of workplace supervisors in this study commented on the importance of students having the confidence to communicate with their peers to progress their assimilation into the workplace. They observed many students were afraid to ask questions if they didn't know or understand what needed to be done. It was noted that the international students in particular lacked the confidence to ask questions for fear they would be considered stupid. Some students complained they felt unprepared for co-op and that the University could have done more. Wyn (2009), Barnett (2006), and others suggest universities promote passive mindsets and create barriers to developing ways of knowing.

The Study’s findings highlight the diversity of individual views regarding what knowledge is of most value. Hager and Halliday (2006) and others acknowledge and promote a broader spectrum of worthwhile knowledge and suggest universities recognise different stakeholder values within its courses and programs. They consider formal knowledge is not superior to other forms of knowledge. Incorporating all forms of knowledge and learning within courses and placement programs in particular, provide students with a richer, more satisfying learning experience. The integration of real world work into university curriculum supports Billett’s (2007) own conclusions.

Students and alumni spoke of their co-op experiences in terms of the people they had worked with, the challenges they faced and the achievements they had realised. In most cases they named the co-op year as the best part of the
program, a finding confirmed in many other studies (Crebert et al. 2004; Bates 2004). However, they felt the University could have done more to prepare them for the co-op year particularly in the preparation of interpersonal skills, handling conflict and learning the language of business. Interestingly the value they attributed to generic skills and abilities changed over the time of the co-op placement, from disdain at the start of their placements, to a necessity. Patrick and Crebert (2004) similarly found graduates without work placement did not easily recognise the need for the development of generic skills during the undergraduate degree compared with those who had.

**IMPLICATIONS FOR PRACTICE (HOW IS WORTHWHILE KNOWLEDGE DEVELOPED)**

Co-op programs provide a range of knowledge sharing, construction and re-construction opportunities that can lead to individual knowledge development, course and program renewal and provide opportunities for applied research project. It is proposed that (a) work-related knowledge be the integrated within program-wide curricula, (b) active learning techniques be encouraged in a variety of contexts and (c) all forms of informal, formal and incidental learning be recognised through reflective conversations and critical thinking assessment practices.

**Intentional integration of program and workplace curricula**

Each individual (student and workplace supervisor) involved in co-op comes with his/her own histories, characteristics and motivations. Within a placement, they draw on their resources from within and what is available to them. It is therefore important that each individual has the necessary knowledge, skills and dispositions to be able to respond to whatever situation they are in as with knowledge comes the confidence to make decisions for action. Both discipline-based knowledge and skills in concert with generic attributes such as communication, self-management, interpersonal, business context awareness and positive attitudes, are necessary for the development of the embodied (cognitive, affective, social, ethical) individual. Students need to have a sense of self-awareness of their strengths and weakness, their interests and motivations and be encouraged to draw on past experiences, reflect on present circumstances and consider and plan future career and life directions. Career planning, learning theories and strategies to transition smoothly into any new workplace should intentionally be integrated into program structures and course curricula.

**Active learning environments**

Active learning environments prior to placements encourage students to become engaged in learning and promote capable, agentive, proactive individuals. Preparing students for work placements presupposes students have access to knowledgeable, capable individuals prior to co-op who have an understanding of world of work and the nature of workplace learning. Yet most teaching academics still reflect traditional learning views that do not acknowledge the value of generic skills and tacit knowledge, lack understanding and skills of active learning techniques and how to employ them within curriculum design and in most cases have no experience of workplace learning and practices. Often assessment tasks lack imagination and relevance to learning objectives and are seen as meaningless “busy” tasks. It is essential that University reward and promotion structures encourage academics to embrace new paradigms of learning and to have access to the training and resources to enable them to deliver meaningful courses.

**Critical reflective thinking and conversations**

It is advocated that adult learning principles be adopted to develop reflective, self-directed learners through planned programs (events and assessments) to encourage critical reflective thinking and conversations between and within stakeholder groups. Left on their own, students’ reflections in learning journals can be quite superficial. Guided questions can prompt deeper reflective thinking and reflexivity. Better still are the reflections that occur as a consequence of interactions and engagements with others such as work colleagues, student peers and within various communities of practice. Regular face-to-face forums for students on placements provide opportunities for students to share and discuss experiences and critically reflect on what learnt about organisation, work and themselves. These conversations can also be directed towards practical theorisation (Hagger and McIntyre 2006) where ideas in practice are evaluated against propositional knowledge. Purposeful meetings, workshops and social events that promote conversation between co-op students, staff and supervisors, provide further opportunities for knowledge sharing and creation, and input into course and program renewal processes.
CONCLUSIONS AND RECOMMENDATIONS

The findings from this Study suggest that there is a middle ground where both the university and industry are equally responsible for providing a platform or ‘safety net’ for the student to test their skills, their abilities, their career choices and develop new skills, abilities and identities.

It is proposed that universities implement processes that engage all stakeholders in practice knowledge construction and reconstruction before, during and after co-op placements. Universities can design and deliver programs and courses that intentionally inform and prepare their students and processes and resources that can guide organisations in planning for co-op. The curriculum design should be such that students are encouraged to take ownership of their own learning and development. Active learning environments have been found to be conducive to the development of proactive, agentive students. However, the design and delivery of such courses and conditions requires informed, capable and engaged teaching academics that have the relevant training and experience for designing curricula that incorporate work-related knowledge and delivery techniques that promote active learning environments.

REFERENCES


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