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Constituting an apprenticeship curriculum
Magnus Fjellström and Per Kristmansson

ABSTRACT
Apprenticeships are required for many trades and can take different forms. In Sweden, one form can be viewed as a pathway where students complete a three-year-long vocational education in upper secondary school followed by a post-secondary apprenticeship in a particular trade. Another takes the form of vocational training within the framework of upper secondary school through an apprenticeship. This study analyses how a more clearly defined apprenticeship curriculum can provide sufficient knowledge to identify and understand learning outcomes in apprenticeships. A theoretical framework of an apprenticeship curriculum is used in the analytical work. The findings show that educational goals are often overlooked during apprenticeships, and thus a deliberative education is overridden by deliberative learning that stems from and is closely connected to the individual’s own perception of what to learn. By constituting an apprenticeship curriculum, this article contributes to an enhanced understanding of how to analyse vocational learning, and thus adds important elements to the research field.

KEYWORDS
Upper secondary school; post-secondary apprenticeship; curriculum development; workplace learning

Introduction
Apprenticeships are required for many trades and can take different forms (cf. Aarkrog, 2005; Tanggaard, 2007). In Sweden, one particularly widespread form can be viewed as a pathway where students complete a three-year-long vocational education in upper secondary school followed by a post-secondary apprenticeship (PSA) in their chosen trade (SCITB, 2013). Another form is the completion of vocational training within the framework of upper secondary school through an apprenticeship (Education Act, 2010:800)—this can also be followed by a PSA (depending on requirements from the relevant industry). Following the implementation in Sweden of an upper secondary apprenticeship education (USAE) in 2008, something of a renaissance in apprenticeships has occurred. Following this reform, some apprentices were connected to an upper secondary school while performing their vocational training in different workplaces (Berglund, Höjlund, Kristmansson, & Paul, 2017; Kristmansson, 2016; Paul, 2017). Yet despite an increased amount of research on the nature of apprenticeships, work that addresses how a learning outcome can be fully analysed in an apprenticeship is still sparse. This article, as well as a few others that have preceded it (cf. Zitter, Hoeve, & Bruijn, 2016), reflects on the difficulties of closely analysing learning outcomes in an apprenticeship setting. Similar concerns are also raised by Wheelahan (2015), who argues that a ‘Vocational curriculum needs to provide students with the capacity to recognize different types of knowledge … so that students can recognize and use knowledge appropriately’ (p. 759). Although ‘Designs for school-based and
workplace learning arrangements have different rationales and purposes’ (Zitter et al., 2016, p. 112), being educated and fulfilling educational goals in the broadest sense through workplace demands is a reality in apprenticeships that needs to be studied. Accordingly, an important issue is whether if a deliberative education or a deliberative learning is in focus, i.e. how the experienced and the intended curriculum (Billett, 2006) is enacted. The type of activities that are undertaken, in relation to what the apprentice is supposed to learn, is, or should be, a key aspect of an apprenticeship. It can be argued that the type of activity performed is founded in tasks that are supposed to be completed under the influence of both indirect and direct guidance provided by others; an assessment of the finished task or the process of getting the task done is undertaken, and it is assumed that every action is supposed to be performed in some particular way. Addressing these issues in the context of the ongoing discussion about learning in vocational education and training (VET), the starting point in this article is that deliberative education and learning through the performance of particular tasks is what distinguishes apprenticeship from just working. Thereby, educational activities are in focus, and thus how the experienced curriculum (cf. Billett, 2006) is related to how the intended curriculum can be perceived by the apprentices.

In deliberative education, there are specified goals to be reached, and therefore it should not be mistaken for the general idea of workplace learning (cf. Billett, 2006). In order to analyse and discuss learning through educational activities in workplaces, the following questions are posed: (1) How can individual, educational and workplace goals contribute to learning in apprenticeships? and (2) How can the type of activities undertaken in an apprenticeship affect learning outcomes?

**Background**

When reviewing research into apprenticeship in general it is immediately noticeable that the volume of work on the subject is increasing. This is especially so in Sweden where learning arrangements in the form of apprenticeships have experienced a revival in the past ten years (see Andersson, Wärwik, & Thång, 2015; Berglund & Lindberg, 2012; Olofsson, Panican, Malo, Angel, & Minguez, 2017). Yet the idea of an apprenticeship is not a new pathway in the Swedish educational system (Hellstrand, 2016). In fact, during the last 35 years, there have been no less than four previous attempts to establish apprenticeships within the school system (Lundahl, 2000; Olofsson, 2008). The latest apprenticeship reform was introduced in 2008 as an optional way for students to pursue a vocational path in upper secondary school. Especially in industries with no or only very recent traditions of apprenticeships, this change has been demanding for both vocational teachers and supervisors in workplaces (Berglund et al., 2017; Lagström, 2012).

As a consequence of this innovation, there is a need for usable tools, concepts and methods that can increase our knowledge of deliberative learning outcomes in an apprenticeship setting. Even in PSAs with often long traditions of this kind of education, there is still a need to understand more fully learning outcomes (Hoffren-Larsson, 2002, 2004). For example, Hoffren-Larsson (2002) argues that time plays an important role in apprenticeships in the construction industry. This is undoubtedly so, but nevertheless it will be argued here that there are other components in an apprenticeship that are just as important, albeit they are not as easy to measure as time. Accordingly, the analytical model of an apprenticeship curriculum used here, displayed in Figure 1, can contribute to an increased understanding of deliberative learning outcomes.

The task of understanding the educational outcomes of workplace learning is not new. Learning and working can be seen as an integrated activity that shapes a learning outcome. This approach towards learning (cf. Billett, 2001b, 2006) is easy to agree on, yet understanding how a learning outcome can be identified and understood in VET is a more delicate task. A learning outcome, as argued by Winterton, Delamare Le-Deist, and Stringfellow (2005), can be defined as a development of competences, skills and knowledge. Another definition is offered by Gonzáles and Wagenaar (2005), who argue that learning outcomes can be described as subject-specific and generic competences. In a deliberative learning outcome, it can be argued that generic skills are learning
outcomes that are of great importance in a modern society where craftsmanship is supposed to be transferable on a changing labour market (Lundahl, 2008). And as argued by Adam (2006), learning outcomes are as follows: ‘Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate at the end of a period of learning. They are explicit statements about the outcomes of learning—the results of learning’ (p. 2). While fully acknowledging the diversity of views on the concept of learning outcomes, it is asserted in this article that a deliberative learning outcome is bounded by a logic determined by the development of skills and competences in relation to educational, individual and workplace goals.

**Educational structure**

To further understand the two settings that are used in the analytical phase, the structure of USAE and PSA education will be described in some detail. At first sight, there are some key differences between them, but there are also similarities. The first and most obvious difference is that USAE is steered by the national curriculum for upper secondary school (GY, 2011), while PSA is handled by industry and trade unions; consequently, and not surprisingly, there are different goals to fulfil. Second, the apprentices in USAE are not usually paid, while a PSA apprentice is paid according to agreement. Another difference is that USAE involves apprentices who are between 16 and 19 years old, whereas a PSA is usually completed between 19 and 22 (although occasionally, and depending on the trade, PSA apprentices can be older). In the next sections, both USAE in the Business and Administration Programme and PSA in the construction industry will be more thoroughly described.

**USAE**

USAE is divided into two halves: one in school which offers mandatory theoretical subjects, and one in work which prepares apprentices with their vocational subjects through participation in workplace activities. Assessment of vocational training that is carried out at workplaces is done by a schoolteacher in close collaboration with the workplace and according to curricular criteria. There is no detailed regulation of how to distribute the time between school and working life, but some important conditions are that at least half of the education is undertaken in one or several workplaces, the workplace part should be based on curricular criteria and the apprentices are not employed. Another important condition is that each apprentice should have an experienced employee as a supervisor who is responsible for guidance at the workplace. The education is, as with all upper secondary programmes in Sweden, three years in duration and steered by the upper secondary school curriculum (SFS, 2010). The workplace-based part of the education of most of the USAE apprentices in this study was in retailing businesses, ranging in size from small clothing or hardware stores to large department stores.

**PSA**

After basic training of three years in upper secondary school, apprentices need to complete a total of 6800 hours (including 2800 hours from the upper secondary school) to become a construction worker with a professional certificate. During this very precise timeframe, the apprentices are supposed to attain 64 learning goals that are determined by the Swedish Construction Industry Training Board (SCITB). The fulfilment of these goals is supposed to be checked during structured talks with the apprentice’s supervisor. This can undoubtedly be seen as challenging because apprenticeship in the construction sector is by its nature completed at different work sites (Worthen & Berchman, 2010), and thus involves different objectives that provide different tasks. By undertaking different tasks at different work sites—and sometimes in different companies—the PSA apprentice develops his or her ability to competently perform different tasks, i.e. developing the requisite skills and meeting stated goals. By just glancing around the room in which you are sitting as you read this article, you will notice that a skilled construction worker has been there at
some point; to be able to build those walls or mount the doors to a decent standard the apprentice construction worker will obviously need to develop adequate skills. Therefore, all of the different tasks that can be identified in a construction site need to be thoroughly learned in one way or another. In this specific PSA, time spent can be seen as equal to fulfilling stated goals, as reaching the stipulated 6800 hours will result in a professional certificate that stands, or should stand, for competences that are equal to the stated goals. During the timeframe of a PSA each apprentice will be assigned a supervisor by the company where he or she is employed. Notably, the supervisor’s function is not always to be beside the apprentice, closely guiding the latter’s performance. The apprentice is mostly seen as a co-worker who works beside other workers with professional certificates. Thus, in some ways, the supervisor’s role is more of an ‘academic’ position.

Data collection
Data from two different research projects are used in order to analyse, in a comparative perspective, learning via educational activities in workplaces through an apprenticeship curriculum. One of these projects studied USAE apprentices in the Business and Administration Programme, and the other looked at PSA apprentices in the construction industry.

The USAE empirical data comprises semi-structured individual interviews with ten apprentices and their supervisors at the respective workplaces. Recordings of four trilateral discussions (meetings between a vocational teacher, the USAE apprentice and a supervisor at the workplace) and observations were also made at each workplace. In total then, the empirical data collected in the USAE part constitute recordings of 20 interviews, nine observations and four trilateral discussions. The apprentices and teachers in the study are from five different schools: two in metropolitan municipalities (200,000 inhabitants), one in a suburban municipality, one in a large city (50,000–200,000 inhabitants) and one in a municipality in a sparsely populated region.

The empirical data from the PSA project comprise semi-structured interviews with 11 apprentices who are being educated in different workplaces, and a survey regarding 64 educational goals that are outlined by the SCITB. The apprentices were all in the final stage of their apprenticeship and thereby close to attaining a professional certificate. So, by using these two settings as examples, the apprenticeship curriculum is put to work.

The methodological approaches in each study are similar, with a focus on a semi-structured approach. In the USAE study, trilateral discussions between supervisor, teacher and apprentice were recorded. This approach might be questioned regarding the extent to which the apprentices are genuinely expressing their own views or not bearing in mind the power relations between the participants. However, the apprentices were also individually interviewed in connection to the trilateral discussions, and it became evident that the apprentices’ views were valid. (The issue of the underlying power relationship is not, of course, exclusive to this study—it is rather something that every study has to deal with.) Both studies have followed the ethical guidelines provided by the Swedish Research Council (Vetenskapsrådet, 2011) in order to ensure the participants’ integrity.

Theoretical framework
Educational arrangements are often related to curriculum goals, and consequently the particular arrangements that are in focus in this article are of great relevance. In Sweden, as well as in other countries, the development of a curriculum is often guided by dominant political ideas and influences (Lundahl, Arreman, Lundström, & Rönberg, 2010) of what will best satisfy future labour market demands. However, when it comes to apprenticeships these curricula goals do not always correspond to workplace goals due to the different rationalities at work (Fjellström, 2014). Or, as Wheelahan (2015) argues: ‘VET curriculum differs from academic qualifications because the purpose of academic curriculum is to induct students into a body of knowledge in academic disciplines, whereas the purpose of vocational curriculum is to induct students into a field of
practice and the theoretical knowledge that underpins practice as the basis for integrating and synthesizing each’ (p. 758). Following this line of argument, the driving logic of education and work can be seen as not always in close correspondence with each other (Van den Akker, 2010, 2005, 2003). Constituting a curriculum that corresponds to both educational logics and workplace logics is a challenging task. Recently, Zitter et al. (2016) elaborated a model that seeks to identify different learning situations, but despite this advance there is still room for improvement in the theoretical base, and as Metso (2014) argues: ‘there is no unanimous model of workplace learning or concept to examine’ (p. 382). Nevertheless, constituting an apprenticeship curricula and increasing the understanding of a learning outcome in an apprenticeship is important.

**Components of an apprenticeship curriculum**

The origin of an apprenticeship curriculum (Figure 1) is a further development of Billett’s (2001a) idea of a workplace curriculum. The core assumption is that the learner moves from peripheral participation into full participation, an idea of learning influenced by Lave and Wenger’s (1991) proposition of ‘legitimate peripheral participation’. In contrast to Lave and Wenger, Gherardi (2009) points out that workplace learning is a process where practice is derived from the community. Thus, it is argued in this article that development of vocational learning includes a central and enhancing position in a workplace community, and that the learning process is linked to the sociocultural context of practice.

However, as mentioned earlier, learning in the broadest sense can be seen as unlimited in terms of time, while learning in an educational setting such as schools or human resource development strategies in companies is often time-constrained. This means that there is a need to understand learning outcomes through educational arrangements that are limited by time. To empirically demonstrate and analyse deliberative education and learning this article will address two educational arenas, one regulated by the government (USAE) and one by the SCITB (PSA). As activities in workplaces are performed by different people, at least three general factors can be detected that influence the type of activity that affects a learning outcome. First, the individuals that are involved can be seen as having some kind of specific goals of their own; second, the workplaces have their own goals (e.g. continuing production and delivery of services); and third, in deliberative education the type of activity is driven and guided by educational goals.

Figure 1. An apprenticeship curriculum according to Fjellström and Kristmansson (2016).
Based on this, it will be seen that a deliberative learning outcome is dependent on four components: task, performance, guidance and assessment (see also Figure 1). The task component can be described as the assignment that should meet one or several goals. Tasks are performed with intentions or meanings, and hence they have a different character depending on the goal(s). From an individual’s perspective, a task can prepare the learner for an extra job (paid) or fulfill personal needs. Tasks that are derived from workplace goals can ensure that the need for production or services at the workplace is met. From a VET perspective, tasks serve to fulfill either individual, educational and/or workplace goals.

Guidance is the responsibility of one or several experienced workers (supervisor and/or peers) at the workplace. In USAE the supervisor is the person with whom vocational teachers communicate about learning issues and how to find tasks that match goals in course syllabi. In PSA, the supervisor is an experienced co-worker who guides the learner towards full membership in the community, and thus the learning process becomes a meaning of practice (Gherardi, 2009). The most profound difference between guidance in the two systems is that PSA apprentices are employed and paid, while in USAE the learners are students by definition. Thus, guidance by supervisors in USAE should consider goals in course syllabi, and they cannot, due to the apprentices’ age (16–19), always give them the same tasks as employed workers. Supervisors in PSA are expected to give access to authentic tasks in accordance with the workplace curriculum (Billett, 2001a, 2006).

Assessment can be viewed as both formative and summative. Formative assessment is mainly conducted by supervisors at workplaces, and summative assessment based on steering documents is essentially the teacher’s responsibility. Whether or not the assessment is formative or summative it can be argued that ‘assessment drives activities that students engage in’ (Meyers & Nulty, 2009, p. 574). In this argument, a student’s engagement or motive to interact with the activity is driven by assessment. Accordingly, assessment is a key activity to understanding the learning outcome.

All of the above describe how different kinds of goals lead to task(s) that in one way or another should be guided and assessed. This process can be summarized in the complex component performance, which leads to a learning outcome. The performance of activities is thereby a crucial part in determining a learning outcome. The constitution of an apprenticeship curriculum involves understanding how these four components interact.

Following Billett (2006), who describes how a workplace curriculum can be expressed and understood/analysed in terms of intentions, it becomes important to identify how the activity is enacted in reality. In workplaces as well as in formal education settings there is some kind of curriculum that explains (and motivates) the intentions behind what is done. The curriculum is also enacted in some way, but this enactment is not performed by those that have determined the intentions (Jarl & Rönnberg, 2015). Thus, it is important that the educational arena enables an interpretation of stated goals to enact an education that provides good conditions in which to enhance learning outcomes.

Consequently, there are no given correlations between how learners experience the curriculum and its stated intentions. In other words, the learners ‘will interpret and construct meaning in ways that may or may not be consistent with the intentions of those who enacted those experiences’ (Billett, 2006, p. 42). Fully understanding a learning outcome is challenging and will be further elaborated in the next sections.

**The apprenticeship curriculum in practice**

This section takes its starting point from the presented model (see Figure 1) in relation to the two research questions. Examples from each study will first be analysed separately and thereafter discussed comparatively.

**The apprenticeship curriculum from a PSA perspective**

During an apprenticeship, various tasks are designed and set to enable the apprentice to reach different kinds of objectives that can include individual, educational and workplace goals. From an
individual’s perspective, the apprentices contribute to deliberative learning by stating their own personal goals that they feel will make them more attractive to employers searching the labour market.

As exemplified by a PSA apprentice (A):

(I)nterviewer: Can you describe a competence that you would like to learn that you cannot dotoaday? You talked [earlier] about general stuff about ceilings or doors and windows.

A: Yes, but to be more skilled to lay the rooftop and so on.

I: How do you think you should be able to develop this competence?

A: Working on such a building would have been great and to have a person who can explain and show me and so on.

I: Is that important?

A: Well, that’s probably the most important thing. Having a person who wants to educate and knows how to educate, so you know that you do it right later when you do it yourself.

By formulating and then reaching their own goals the apprentice can be seen as a key contributor to a deliberative learning outcome. Depending on what task the apprentices can perform, or what goals that they are expected to reach, the apprentice’s own idea of assigned tasks plays a crucial role in whether the learning outcome is deliberative or not.

Or, as another apprentice states in answer to the question:

I: What expectations do you have of this company when it comes to developing new competencies?

A: Yes, well you do not place an apprentice to work on mounting gypsum boards or so. Getting tasks with some responsibility and solving problems yourself and thinking of such tasks. I got a lot of that at the previous workplace. There was a lot of emergency tasks, you got there and had to think how to solve the task. You got the task and there were no drawings, you had to solve it yourself. (. . .)

I: How did it go?

A: Well it worked in some ways.

I: Did you feel that you managed everything?

A: Yes, I believe so.

I: Were you by yourself on these kinds of missions?

A: Yes, I was by myself.

I: How did you feel—they trusted you?

A: Well, you grow that’s for sure. Personally, I believe that it is good that they trust and have faith in one, instead of having someone that is always monitoring what you do.

The idea that performing tasks that are not only repetitive but also challenging is related both to what kind of tasks can be done at the workplace and to the courage to try new tasks. Whether or not the type of activity stems from individual, educational or workplace goals, the apprentices’ engagement with the task is a key contributor to a deliberative learning outcome.

As demonstrated in these two examples, the individual’s goal to learn can be fired either by the need from the workplace to perform and the likelihood of learning from new tasks, or, as stated in the first example, by correct guidance from other workers. In deliberative education that rests on educational and the time-limited performance of tasks, it is noticeable that the learning outcome is affected by the interaction between the kind of tasks that it is possible to perform, the individual’s interest in learning and the guidance that is offered. How deliberative learning occurs in relation to educational goals is, however, problematic here, because neither of the interviewed apprentices could say that they were aware of any learning goals. Instead, they referred to a timesheet that is...
used by the apprentices to document their worked hours. This timesheet was, in fact, referred to by all of the apprentices in the survey, but it can be exemplified by the following exchange:

I: Do you know what competences you should develop during your apprenticeship?
A: Yes, it is everything; well, you should have hours in everything that is categorized in the timesheet.
I: Can you give an example?
A: Yes, it can be concrete, reinforcement, framing and stuff like that.
I: Do you feel that you have good knowledge about what to learn?
A: Yes, quite good.
I: How do you think that you are progressing?
A: I believe that it’s going great. I am starting to get hours in every category.

So, based on these examples it would appear that being an apprentice in the construction industry is regulated by educational goals that the apprentices are not actually aware of (Fjellström, 2017). This issue was highlighted some time ago by Hoffren-Larsson (2002; 2004), who suggested that a closer relationship between being an apprentice and learning stated goals ought to be established. And yet some 15 years after she first suggested the connection, the precise relationship between educational goals and apprenticeships remains uncertain. We might well ask whether educational goals do indeed play any role in some apprenticeships and thus how the intended and the enacted curriculum connect.

It is likely that at best educational goals form a subordinate adjunct both to individual and workplace goals during an apprenticeship, and therefore plotting hours on a timesheet is more closely related to the latter.

**The apprenticeship curriculum from an USAE perspective**

The apprentices in USAE also perform tasks that are a part of daily work at the workplace. These tasks should meet the curricula goals, although sometimes apprentices have the opportunity to fulfil personal goals as well.

In USAE the performance of tasks at workplaces is strongly characterized by initially performing seemingly uncomplicated but still important duties, such as unpacking goods and filling up store shelves. The apprentices are then offered more complicated tasks to complete (Kristmansson, 2016). This is discussed in the following excerpt from an interview with a fashion store apprentice:

I: Can you describe your initial work tasks? What did you learn initially?
A: I was mostly in the inventory unpacking goods, folding clothes in different ways and such things. It was completing basic tasks.
I: How did you learn these work tasks? Did someone show you or…?
A: Yes, it was a bit so but it was just like unpacking the goods, fold them, put them in the inventory or in the store. It was a lot that they showed first and then I did it on my own. (…)
I: And what were you offered to do next?
A: It was to be out in the store and have contact with customers and such like. And eventually to make display windows.
I: How did you learn to make display windows? It is an important work task, isn’t it?
A: Yes, it is an important part of the business in some ways. You show what fits together and so on … it’s inspiration. It is quite difficult but they [the supervisors—authors’ comment] helped me a lot with that. And then you can always ask for help if you get stuck.
I: How did you practise this? Were you responsible for the entire display window or just a part of it?
A: I was making the entire display window and I asked if it turned out well, and then they fixed it a little more.
I: You did it yourself?
A: Yes, I made the base and then they adjusted a few things so it turned out even better.
The apprentice describes how he started in the inventory with very basic tasks. This seems to be an obvious and widespread pattern: apprentices in stores start with tasks that are essentially about handling the goods.

In the particular example quoted above, the apprentice then went on to customer contact, which is a crucial task for shop salespersons since selling is often done through successful social interaction. This is shown in the following quote from an interview with a supervisor: 'Choosing the trade industry is good if you are social and like to socialize with people […] Many of the apprentices are not so good at talking'. The apprentice in the example above was quite shy during the interview, and obviously experienced difficulties and discomfort with customer contact. This is a problem for him as well as for the supervisor, who put it like this: 'He came one Saturday, he had been given the opportunity to work a Saturday, and then he stood at the men’s department like this [shows a face of extreme uncertainty]. He told us that there were so many people. And then it is like it is freezing for him'. This is an aggravating circumstance in this kind of industry since social competence is one of many key competences to be mastered (Kristmansson, 2016; Tsagalidis, 2008). If the apprentice lacks this kind of competence it might affect his or her chances of reaching individual and workplace as well as educational goals.

An obvious and illuminating example of deliberative learning is this apprentice's reflections on additional sales. The apprentice combines knowledge from the school-based part of the education with practice at the workplace.

I: Earlier you talked about additional sales, for example those erasable ink pens you mentioned before. How do you start such a sales process? How do you introduce it?
A: I usually think that if a customer is standing here at the calendars, they probably need a pen to write with in the calendar. Then I mention this erasable ink pen, I mean it never hurts to mention it. Now that we had a campaign on this special pen it was obvious to mention it. And not only for customers buying calendars.
I: How did you learn this sales talk?
A: In school. My teacher described quite clearly in the first year how additional sales work. We had a chapter about additional sales and we had sales talks in the class and learned about it. I've also developed a lot here. My supervisor has also described quite a lot and told me it might be smart that if someone buys a printer, you can sell ink cartridges and paper. It never hurts to ask.

This apprentice shows that he is aware of the learning process and how to use theoretical as well as practical knowledge to reach his goals and thereby shaping his learning by combining the intended curriculum and individual as well as workplace goals.

Upper secondary apprentices are often given tasks related to the daily routines at the workplace, which enhances the learner's ability to construct their own learning from the circumstances of practice (Gherardi, 2009). Teachers, to varying degrees, influence the tasks apprentices are offered. In trilateral discussions and other communications between teacher, supervisor and apprentice, teachers often point out aspects in the curricula criteria that have not yet been accomplished. The following excerpt from a trilateral discussion took place between a teacher (T) and a supervisor (S) in a supermarket; they talk about how to find an opportunity for the apprentice to learn the administration of delivery notes and invoices:

T: Is it possible that Mike, if it is a little quiet here on occasion, can follow somebody who is working with this? Just a few days, to get an insight into what happens with delivery notes and invoices. […] then he at least has some idea about it.
S: We can try that absolutely. […] you receive goods sometimes out there, you sign a delivery note with the hand control. The delivery note is checked and if it is correct it will be sent up to the office and they will do a check-off against the invoice.
This excerpt gives an example of what happens with delivery notes and invoices, something which
is generally beyond the daily routines for the shop-workers in this supermarket but which is
nevertheless a part of the curricula criteria and thus should be carried out somehow.

In some cases, apprentices have individual goals that they want to fulfil. One example is to learn
the check-out system and to use the cash-register. In some shops, this competence is a key to paid
extra work in the evenings and at weekends.

However, all apprentices must learn an entirely new work task at one time or another. In this
process direct guidance as well as indirect guidance (Billett, 2001b) is important. Below, an
apprentice describes the process of learning new work tasks:

I: How do you learn a new work task at this workplace?
A: It is a little bit different here compared to my last workplace. At that place they kind of threw
one into it, and just told me where to find things and so on. That was it, and of course we
could ask but they just threw one into it from the beginning. But here it is more like taking it
bit by bit. You go to a department and learn things there successively. I like how they set the
level and the methods in this shop much more.

I: When you are learning something new, are you initially shadowing someone or are you
allowed to do things on your own with the supervisor correcting, or how is it usually done?
A: Usually I´m alongside and they are showing and explaining and so on, and I find that quite
nice, especially the first day. But then you can try things on your own and I find it pretty nice
to ask questions.

I: Is it only the supervisor that guides you to new knowledge?
A: In the beginning it is like that but later on it is others as well.
I: So you can go to anybody if you have questions?
A: Exactly.
I: You have a quite good relationship with your co-workers?
A: Yes.
I: Do you think you can use what you have learnt here in some other kind of shop?
A: Yes, I think so. I used to work extra in a shoe store, and yes, it is a little bit different there.

In USAE the workplace goals play a crucial role in the apprentices’ learning. In general, it is the daily
routines, i.e. the workplace curriculum (Billett, 2001a), which determine the kind of tasks which
apprentices are given. But to develop deliberative learning it is important that educational as well
as individual goals are included and that ideally, the intended and the enacted curriculum are
consistent.

The examples from both USAE and PSA show that whatever the activity, deliberative learning is
greatly dependent on individuals’ own interests as well as the options offered by the workplaces.
These findings will be further discussed and analysed in the next section.

Discussion and analysis

Given the examples that we have used to highlight some typical situations, this discussion and
analysis will apply the theoretical model of an apprenticeship curriculum to explore how individual,
educational and workplace goals can contribute to a deliberative style of learning in an apprentice-
ship; we will also consider how the type of activities undertaken in an apprenticeship can affect
learning outcomes.

Deliberative learning in apprenticeship

There is no doubt that both USAE and PSA apprentices are given specific tasks irrespective of the kind
of goals that should be guiding the learning situation. Yet it is not only the ostensible learner who
experiences learning. Supervisors also learn from the process, for example when curricular criteria require tasks that are demanding even for them as experienced practitioners. Another issue that affects the USAE apprentices’ ability to perform different tasks is whether or not the apprentice is placed in a workplace that actually provides tasks that correspond to what they should be learning—not all workplaces can offer vocational training that meets all curricular criteria. This is also an issue for PSAs, where individual workplaces and the specific tasks that they provide only partially correspond to the desired goals. In fact, workplace and individual goals often tend to override educational goals.

Guidance by the supervisors should lead the learner towards full membership of the community, but also, as mentioned earlier, it should offer tasks and activities in accordance with learning goals. This is demanding for the USAE supervisors who must develop knowledge about the content of the vocational courses that apprentices are attending and determine how it can fit into the daily work of the store. In PSA this should in theory also be an issue, but as demonstrated earlier, the PSA idea of what knowledge the apprentices should develop usually means completing categories in the timesheet. This is an issue (see Hoffrén-Larsson, 2004) that can clearly be related to workplace demands rather than individual or educational goals.

The activity that is performed is, however, bounded by the four components set out in the apprenticeship curriculum, namely: task, guidance, assessment and performance. Yet the steering part of the activity is derived from the three types of goals (individual, educational and workplace). To some extent it can be said that workplace goals override other goals, but the driving force of the individuals eager to become better and more attractive workers in the labour market impacts on the actual task that the apprentices perform and therefore affects what can be learned. The critical point is how educational goals can be incorporated into everyday activities at workplaces. For PSAs at least, this is an issue that will need more attention. For the USAE apprentices, in contrast, educational goals are at least discussed during their apprenticeships, usually as a result of the above-mentioned trilateral meetings (that do not appear to happen in PSA).

**Type of activity in apprenticeships**

Deliberative education according to goals that can be identified and the type of activity that takes place are closely related. Indeed, the tasks that are set are often so closely linked to workplace goals that the apprentices end up performing tasks that are wholly determined by those circumstances. Yet in USAE apprenticeships some correlation between educational goals and what the apprentices perform can be discerned. This seems to be related to the trilateral discussions that occur between workplace supervisors, the teacher and the apprentice. PSAs tend to lack these trilateral discussions where educational goals can be aired, and the communication which does take place often concerns more routine issues, such as the apprentice’s part in the community. Discussions that relate to what the apprentice should be learning are therefore often absent. This is an issue that Hoffren-Larsson (2002) suggests could be solved by setting clearer goals, instilling more knowledge about education, creating a pathway of educational structures through school and work life and finally by questioning the traditional view of attempting to educate apprentices in line with a constantly changing labour market.

Nevertheless, it should be stressed that performing tasks that stem from workplace goals can be related to educational goals. Yet this (often) unspoken correlation between the two in a sense corresponds to a workplace curriculum (Billett, 2001a), rather than to an apprenticeship curriculum that focuses on education.

The close relationship between performing tasks and the guidance provided is a key process in deliberative education. As shown in the examples of both USAE and PSAs, direct guidance by showing and explaining how to perform a task is frequently necessary to develop adequate competence. In one example, however, direct guidance is lacking; instead, having the responsibility for deciding and solving problems brings the apprentices closer to constructing their own learning (cf. Gherardi, 2009). Thus, more indirect guidance where the apprentice is being assessed through performed tasks can sometimes be assumed. That said, being assessed in work for a PSA is
regulated within the demands of the construction industry of how tasks should be performed and not according to educational demands. Although tasks are guided and assessments are made and every activity is performed in some way, the performance of different types of activities will enhance the apprentices’ competences as well as help them to become a full participant in the community. It is likely that this movement from novice to full member of the community reflects the competences needed in the workplace. Thus it is that educational goals can be overlooked; or, as the PSA apprentices in work themselves reflect, simply box ticking hours in every category on the timesheet can appear to provide adequate competences. But being fully educated through an apprenticeship will surely require one or several workplaces to provide tasks that correspond to educational goals; at the moment, educational goals in both PSAs and USAE can be fulfilled without a deliberative plan of action for reaching stated goals.

**Conclusion**

Our analysis shows that many of the activities that the apprentices perform are highly adapted to workplace goals, a situation that is similar to a traditional apprenticeship. The nature of the tasks is largely related to the activities that are offered in the workplace. In contrast, an apprentice’s personal goal of being a ‘competent’ worker can affect what they do. How the apprentice is assigned—or chooses—an activity has its basis in the complex relationship between the personal goal of being an attractive prospect on the labour market and workplace goals. Regardless of how an activity is initiated, guidance from more skilled workers is crucial in affording a deliberative learning outcome. Guidance—either direct or indirect—is important according to the apprentices, although the performance of tasks and guidance are both important as every activity is assessed. It is particularly noteworthy that an assessment often relates to the correct performance of a specific task according to workplace demands and not to educational goals. These findings show that the timeframe that was suggested as a key element in an apprenticeship curriculum is important in order to understand the conditions under which educative processes occur in working life. So, deriving from Wheelahan’s (2015) argument that a curriculum that is made for VET settings needs to recognize knowledge, it can be argued that by constituting an apprenticeship curriculum this article has started that process. Thereby the students as well as teachers and supervisors can use this model to identify learning outcomes in relation to individual, educational and workplace goals. Yet crossing the boundaries between education and work (Akkerman & Bakker, 2012) is by its nature difficult because ‘when the work is done, the job is over’ (Worthen & Berchman, 2010, p. 226). Reaching educational goals in workplaces can therefore be said to be inherently difficult, although vocational skills will still be developed by everyday activities (Billett, 2009). However, deliberative education and learning through the performance of activities is what distinguishes apprenticeship from just working, and consequently the apprentices are able to construct their own learning through exploiting the circumstances provided in the workplace. Furthermore, this study shows that despite the obvious differences between the two settings (e.g. age, educational structure, occupation) similar concerns can be identified in each, and hence we can conclude that individual and workplace goals tend to override educational ones in both. Two central questions then, emerge: to what degree do educational goals lead to the kind of knowledge required in apprenticeships, and how can work life influence learning outcomes? In this study, educational activities have been in focus, and thus the experienced curriculum (cf. Billett, 2006) is related to how the intended curriculum has been perceived by the apprentices. The roles, delineations and hierarchies in a deliberative educational process have thereby been addressed.

So, by constituting an apprenticeship curriculum this article contributes to an enhanced understanding of vocational learning and adds to the research field by exemplifying apprenticeship from the two different learning structures considered. Using this model in future research will introduce an important dimension to the analytical work of understanding the relation between deliberative education and deliberative learning outcomes. And going back to Metso (2014) (who, it will be recalled, argues that a model examining learning cannot be unanimously agreed upon) this study
shows that constituting an apprenticeship curriculum can productively feed in to that discussion. Likewise, Zitter et al.’s (2016) work on identifying learning situations is here expanded with a framework of analysing learning outcomes in situations that have been clearly defined. By constituting and applying an apprenticeship curriculum this study has shown—from two quite different perspectives—how learning outcomes can be identified and analysed. In sum, the theoretical approach adopted here has added to the discussion of educational perspectives in apprenticeships; however, the field remains open for additional research, and further studies with different theoretical approaches on how to understand both a deliberative education and learning are still needed.

Disclosure statement

No potential conflict of interest was reported by the authors.

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