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relating learning experiences to learning outcomes

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Professional Development in Sport Psychology: Relating Learning Experiences to Learning Outcomes

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To enhance the training of sport psychology consultants, it is important to know which learning experiences are useful for which components of professional development. We interviewed 15 novice consultants on their learning experiences related to 13 different topics. *Traditional learning experiences* (e.g., courses, teachers) were related to the development of practical *know-how*. *Learning from others* (e.g., peers, colleagues) was related to *professional development* (i.e., dealing with issues, challenges, and dilemmas that occur in sport psychology practice). *Practical experience and reflective activities* were related to both *know-how* and *professional development*. These results can be used to shape effective sport psychology education.

The journey toward efficacious training in applied sport psychology starts with outlining what sport psychology practitioners should learn (i.e., learning outcomes), followed by matching appropriate learning experiences to achieve these learning outcomes (e.g., Biggs & Tang, 2011). The current study is centered around these two related educational constructs of learning outcomes and learning experiences. Learning outcomes (also known as learning objectives, learning standards, or intended learning outcomes) address the question of what sport psychologists should learn. Learning experiences refer to “any interaction, course, program, or other experience in which learning takes place” (“Learning Experience,” 2013). Learning experiences have received increasing attention in the sport psychology literature (e.g., McEwan & Tod, 2014; Owton, Bond, & Tod, 2014; Tod, Marchant, & Andersen, 2007). Studies have underscored the importance of practical experience, live demonstrations by experts (e.g., teachers or supervisors), and role-plays. Moreover, interactions with peers and training staff were found to be important for professional development, as were sports participation, personal therapy, and employments in other fields. From these studies and related literature the importance of supervision and reflective practice for professional development of sport psy-

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Table 1
Topics Addressed in the Interviews (Derived from Hutter et al., 2015)

Topic	Brief description of the topic
Guiding question of the case/treatment goals	Getting to the core of the clients' needs, setting treatment goals, and prioritizing them.
Assessment methods/psychological report	Selection and use of assessment methods for intake sessions with clients, and the interpretation and reporting of the information.
Treatment outline	Designing an outline to accomplish the treatment goals.
Adapting treatment plan	When in doubt about the original treatment goal and outline, being able to adapt the goal and outline to better fit the clients' needs.
Interventions	Having a broad intervention repertoire and delivery skills.
Referral and fear of ineffectiveness	Handling doubts on personal effectiveness, the "fit" with the demands of specific cases, and the possible need to refer.
Personal thoughts and feelings	Being aware of personal thoughts and feelings, and managing these in professional practice.
Balance client-led/directive counseling	Having a personal balance between directive counseling and a client-led approach.
Session management	Managing timing and decision making within sessions.
Business operations	Being an entrepreneur, and managing the business side of practice, for example building a network, treating late cancellations, etcetera.
Coping with athlete's environment	Dealing with significant others of the athlete client such as parents and coaches.
Coping with athlete's motivation	In case of a (perceived) lack of motivation of the athlete client, being able to motivate, or deal with low motivation.
Coping with boundary issues	Guarding personal boundaries in interaction with clients, and respecting the athletes' boundaries.

chology practitioners also emerged (e.g., Cropley, Hanton, Miles, & Niven, 2010; Foltz et al., 2015; Knowles & Gilbourne, 2010; Woodcock, Richards, & Mugford, 2008).

Training and education usually offer trainees a wide variety of learning experiences. Insight into which learning experiences are helpful for which learning outcomes can help educators and trainees shape learning. If, for example, trainees find role-plays particularly helpful in developing intervention skills but less useful for developing confidence as a professional, then role-plays can be used extensively when the focus is on intervention skills, and other learning experiences can be offered when aiming to improve professional self-confidence (in line with constructive alignment for education, e.g., Biggs & Tang, 2011).

Recently, Hutter, Oldenhof-Veldman, and Oudejans (2015) investigated what trainee sport psychologists wanted to learn in supervision. They found 19 common learning objectives of trainee sport psychologists (see Table 1 for an outline and brief description of selected topics). Sport psychologists should become proficient in these topics before they start working independently from a supervisor. The topics from the study can thus be seen as (part of) intended learning outcomes for the training of sport psychology practitioners and are used as such in the current study. Hutter et al. categorized the topics in two main categories, labeled *know-how* and *professional development*. The *know-how* category refers to practical, pragmatic skills. The *professional development* category refers to issues, challenges, and dilemmas that sport psychologists encounter and that they have to learn to cope with. Topics from both the *know-how* and *professional development* categories were used in the current study because both categories contain valuable learning outcomes for sport psychology consultants.

The selected topics are thought to be salient and relevant for (novice) sport psychology consultants and fit well with the themes emerging from individual accounts of professional development (e.g., Collins, Evans-Jones, & O'Connor, 2013; Holt & Streat, 2001; Lindsay, Breckon, Thomas, & Maynard, 2007; Tod & Bond, 2010; Tonn & Harmison, 2004) and the findings of Stambulova and Johnson (2010) on lessons learned by sport psychology trainees.

AIM AND EPISTEMOLOGY OF THE STUDY

The aim of the current study was to investigate which learning experiences are useful for which learning outcomes, and in what way learning experiences contribute to learning outcomes. This research aim is grounded in pragmatism, an epistemology that is concerned with functionality, with what works (e.g., Driscoll, 2005; Giacobbi, Poczwadowski, & Hager, 2005; Sparkes, 2015). Pragmatism transpires on two levels in the current study. First, the impetus of the study was the pragmatic question of what works in the training, learning, and development of sport psychologists. In other words: Which learning experiences are useful to them? Due to the notion (and teaching experience) that there may not be “all-purpose” learning experiences, the question was further specified to: What works for which outcomes, and how? The research was thus driven by a pragmatic desire to learn about the relationship between learning experiences and learning outcomes.

Second, the pragmatic epistemology of the current study is reflected in the research methodology and data analysis methods. Pragmatists contend that the research question should drive methodological choices (e.g., Onwuegbuzie & Leech, 2005; Sommer Harrits, 2011; Sparkes, 2015). In the current study, the interest was in the lived experience of novice sport psychology students and how they understood their development toward different learning outcomes. Therefore a qualitative method of data collection, particularly interviews, was chosen.

To be able to answer the research question, the qualitative method of data collection was combined with a quantitative method of analysis. Sparkes (2015) noted that for pragmatists “the quantitative and qualitative paradigms and their associated methodologies are compatible and can fruitfully be used in conjunction with one another within a ‘what-works’ approach” (p. 51). In addition, Giacobbi et al. (2005) reported that pluralistic methods are often applied by pragmatists during multiphase research projects.

The aim of the current study is to investigate the relationship between learning experiences and the development of novice sport psychology consultants on different aspects of service delivery. Insight into the relationships between learning experiences and learning outcomes may help trainees, educators, and supervisors to pursue or design learning experiences that are most helpful to achieve the intended learning outcomes. Moreover, it may inspire continued professional development efforts of novice consultants.

METHOD

Participants

Participants were recruited from a 60 European credits¹ post-master's program in applied sport psychology in the Netherlands, hereafter referred to as *the program*. The program can be entered with a master's degree in psychology or sport sciences and is designed to prepare students for practice in sport psychology. The program contains 12 modular courses (e.g., advanced sport psychology, interventions, social aspects, and guidance of teams). Each module contains at least one practical assignment with athletes, teams, or coaches. In addition,

trainees complete seven cases (minimum number of contact hours is 70 hr) during which they are supervised by three supervisors.

All 28 graduates of the program were invited to participate in the study. Eighteen graduates (64%) volunteered to participate. Pilot interviews were conducted with two of them. One other interviewee was omitted from analysis; she had quit sport psychology practice directly after graduation. Of the remaining 15 participants ($M = 35$ years, $SD = 7.5$), eight were male and seven were female; seven participants held a master's degree in psychology before entering the program, and eight held a master's degree in human movement sciences or sport sciences. Participants had, on average, 231 hr ($SD = 214$) of experience as an applied sport psychologist after graduation. The participants stemmed from two cohorts. The heterogeneity of the sample (in terms of gender, background, experience, cohorts) ensured a rich contextual background and various styles of learning to be represented in the study.

Interview Procedure and Guide

The second author served as an interviewer for the study. She held no position in the program and was not a stakeholder in the field of applied sport psychology. These characteristics made her an independent interviewer and enabled participants to reflect openly and honestly. Interviews were conducted either face-to-face or through Skype and were audio-recorded.

Tod et al. (2007) recommended "in-depth examination of the rich details and complexities of those experiences. Interviewing graduates . . . should contextualize and extend the findings from sport psychology graduate surveys" (p. 319). Interviews were thus chosen based on the expectation that interviews would provide richer data than surveys and that this data would help illustrate the relationship between learning experiences and learning outcomes. In addition, it was expected that interviews would require less time and effort of the participants. Although of lesser importance from a pragmatic viewpoint, using interviews for data collection is in line with the majority of existing literature on learning experiences (e.g., McEwan & Tod, 2014; Tod et al., 2007), enabling comparison with the findings in the current context. A structured interview method (as opposed to semistructured or narrative interviews) was chosen to allow for the quantitative steps in data analysis as described later.

In the interview, learning outcomes outlined in Table 1 were discussed one by one. For each learning outcome, the interviewer explained what was meant by the learning outcome. Next, she asked whether the interviewees felt that they had learned or developed on the particular topic. If the interviewees assented that they had, the interviewer asked which learning experiences had helped them to develop on the topic.

In the two pilot interviews the interviewees mostly elaborated on development itself; they shared how they acted different now, compared to before. Although these answers offer a rich illustration of professional development, the focus of the study was on the experiences that brought about the development. McCracken (1988) suggested to use planned prompts or auto-driving prompts when the topic of interest does not emerge spontaneously. In line with this recommendation, we decided to give the interviewees a sheet listing a wide variety of examples of learning experiences (e.g., classes, self-reflection, workshops, learning from peers and colleagues, and learning from other employment or education other than sport psychology) at the start of the interview. It was made clear to them that any experience that helped them develop was relevant and that they did not have to limit themselves to the examples on the sheet. The sheet helped interviewees understand the purpose of the interview and what was meant by learning experiences. This contributed largely to the amount of information obtained on learning experiences (i.e., a higher number of relevant, meaningful units in the transcripts,

and higher levels of groundedness of the interviews). Interviewees checked the sheet with learning experiences every now and then, and the interviewer referred occasionally to the sheet to stay on topic, but in general the interviewees spoke in a spontaneous, self-directed manner about their learning experiences.

Data Analysis

The interviews were transcribed verbatim. The transcripts were then checked; the research team listened to the audio recording while reading the transcripts. After having read the transcripts several times and using the interview guide, the first and second author made a first draft of the coding book. The coding structure was designed to label each meaningful unit in the interviews (hereafter called *quotation*) with information on the learning outcome (i.e., the topics addressed in the interview; see Table 1) and how learning occurred (i.e., what kind of learning experience was described by the interviewee). The examples of learning experiences from the sheet were used as initial codes for the code book, and additional codes were added through the coding process by the research team (i.e., open coding).

Different measures were taken to enhance the trustworthiness of coding (following recommendations of Silverman, 2015). First, the research team was trained in coding. The research team formulated operational definitions of each code, creating a shared understanding of the meaning of the codes. Then, one interview was selected and coded collectively in a research team meeting. Next, the research team members individually coded three selected interviews. Coding was then compared and discussed, and consensus was reached. Next, the remaining interviews were coded by a member of the research team and checked by another member. The first author did a final check of the coding of all interviews. Throughout the study, research team meetings were held in which segments of interviews were reviewed, corrections of coding were discussed, and newly added codes were discussed and operationalized. The final coded interviews were sent back to the interviewees, together with an explanation of the coding (i.e., member checking).

Categorization of Learning Experiences

To structure the interpretation of the results, we classified the obtained learning experiences into three categories. The first category is *traditional learning*; learning experiences in this category refer to classical, formal learning in which structured and intentional learning stems mainly from external sources (e.g., teachers, books). The category contains quotations coded with *education program, module, teacher, homework assignments, (feedback from) exam committee, prior education, other training, and literature*. The code *education program* was used when interviewees referred to the post-master's program in general terms, without specifying which part of the program helped them to develop. The code *other training* was used for any additional formal training the interviewees took, such as conferences, seminars workshops, and courses.

The second category is learning through *practical experience and reflective activities*. Both practical experience and reflective activities are incorporated in this category because they are interrelated and usually mentioned in combination (see also the Results and Discussion section). The generic code *active learning* was originally used for all quotations that referred to experience, for example, trying things out, applying methods with higher degrees of personalisation or flexibility, and trying to be guided by "hunches" more often. After further inspection of the quotations, three distinctions were made within this code: *experience* (used when interviewees referred to practical experience in general, without specifying further), *individuation* (when interviewees described how they learned from adapting and personalizing techniques

and procedures they were taught), and *experimenting* (when interviewees described trying out new ideas, and learning from the effects of these experiments). Other codes in the category learning through *practical experience and reflective activities* are *supervision*, *casework* (when interviewees referred specifically to the experience they gained as part of the casework in the program), *reflective practice*, *response client* (when interviewees described that they learned from the reactions or feedback they got from clients), *recording* (e.g., recording of sessions, presentations), and *role-play*.

The third category of learning experiences is *learning from others* and contained the codes *peer consultation* (also known as peer supervision), *learning from colleagues*, *learning from fellow students*, *learning from other people* (who are not colleagues or fellow students), and *learning from others* (unknown whom). The latter was used when it was unclear from which other person(s) the interviewee had learned.

The three categories are not completely mutually exclusive; one might, for instance, argue that learning from a teacher is also *learning from others*, that role-plays can be a part of *traditional learning*, or that peer consultation fits with the category *practical experience and reflective activities*. The learning experiences were categorized based on the existing literature on learning experiences (e.g., Collins et al., 2013; McEwan & Tod, 2014; Owton et al., 2014); the concepts of formal, informal, and nonformal learning (e.g., Eshach, 2006); the researchers' opinion on which category they fitted in best; and on the basis of co-occurrences of learning experiences. The resulting categorization was then discussed with experts from educational sciences. These experts agreed with the categories and their description and reported no controversies with existing views in educational sciences.

Check on Development

Before exploring which learning experiences the interviewees found helpful for a specific learning outcome, it was important to check whether they had actually developed on the outcome. Interviewees mostly confirmed that they had developed professionally on the discussed learning outcomes (186 instances). In 32 instances, participants expressed that they had not developed much or not enough yet on a specific topic. Development was still a work in progress for a relatively large group of participants on *referral and fear of inefficacy* ($n = 6$) and *business operations* ($n = 8$). Conclusions about learning experiences that contributed to these two topics should thus be interpreted with caution.

Quantification of Data

The research question of which learning experiences are useful for which learning outcomes dictated that the qualitative data on useful learning experiences be analyzed further to establish the relationship between learning experiences and learning outcomes. With Atlas.ti (for Mac, version 1.0.28) combinations of learning outcomes and learning experiences were identified. The 13 learning outcomes addressed in the interviews and 22 different codes for learning experiences resulted in 286 possible combinations. We then calculated how often these combinations occurred (hereafter called *co-occurrences*). In relating the learning experience to learning outcomes, the qualitative data were thus transformed into quantitative data, a process called quantitizing (e.g., Sandelowski, Voils, & Knafl, 2009).

Quantification of data obtained from structured interviews is commonly applied in mixed methodology research (Bryman, 2006). Because both the number of quotations per topic and per learning experience vary considerably, standardization of the co-occurrences is needed to interpret the relative contribution of each learning experience to each learning outcome. This standardization can be achieved by calculating odds ratios (e.g., Mosteller, 1968; Rosenthal,

1996). Odds ratios can be used as a measure for strength of association between categorical data (e.g., Rosenthal, 1996; Tan, Kumar, & Srivastava, 2004). Based on the co-occurrences, we calculated the strength of association between a learning experience and a learning outcome. Strength of association was calculated as the ratio between the probability that a specific learning experience contributed to a certain learning outcome and the probability that other learning experiences contributed to the learning outcome.²

Strength of association

$$= \frac{(\text{learning experience_learning outcome}/\text{learning experience_all other learning outcomes})}{(\text{all other learning experiences_learning outcome}/\text{all other learning experience_all other learning outcomes})}$$

For example, the learning experience *teacher* co-occurs four times with the learning outcome *treatment outline*. However, it also co-occurs with other learning outcomes (e.g., *assessment methods, interventions*), adding up to 25 co-occurrences with other topics than *treatment outline*. The probability that *teacher* is mentioned in relation to learning about *treatment outline* is therefore $4/25 = .16$. Other learning experiences also co-occur with *treatment outline* (e.g., *supervision, module*). In total, 48 co-occurrences were found between *treatment outline* and learning experiences other than *teacher*. These learning experiences other than *teacher* co-occurred 608 times with learning outcomes other than *treatment outline*. The probability that learning experiences other than *teacher* co-occur with *treatment outline* thus is $48/608 = .08$. The strength of the association between learning from *teachers* and *treatment outline* is calculated as the ratio between these two probabilities, that is, $.16/.08 = 2.0$. This strength of association means that the probability that *teachers* are mentioned as a source to learn about *treatment outline* is twice as large as the probability that any of the other learning experiences is mentioned in relation to *treatment outline*, thus suggesting a clear contribution of teachers to learning about treatment outlines. Therefore, if a group of students is to learn how to establish a treatment outline, then learning from an expert who teaches the topic (i.e., *teacher*) seems to provide a useable and useful route, whereas other learning activities such as *literature, or peer consultation*, are less likely to be of use.

Rosenthal (1996) advocated qualitative descriptors of strength of association and suggested to describe odds ratios of about 1.5 as weak associations, about 2.5 as moderate associations, about 4.0 as strong associations, and about 10.0 as very strong associations. However, such qualitative descriptors are not without critique and may (need to) vary between disciplines (Rosenthal, 1996). In the current study, we report the values of the odds ratios, rather than qualitative descriptors. An odds ratio of 1 means that one single learning experience is as strongly associated with a learning outcome as all other learning experiences taken together. For a comparison of one learning experience to all learning experiences collectively, the minimum ratio of 1.5 for a weak association is thought to be too conservative. Therefore, an odds ratio of 1.0 was used as an additional cutoff point to Rosenthal's classification in Table 2; odds ratios greater than 1.0 are thus (arbitrarily) regarded as meaningful.

To summarize, we quantized the qualitatively obtained data by counting co-occurrences and calculating odds ratios from these counts. This allowed for analysis of the extent to which learning experiences related to learning outcomes, thus providing a deeper understanding of the relationship between them. In the Results and Discussion section, the relationship between learning experiences and learning outcomes is illustrated by quotes from the interviews.

RESULTS AND DISCUSSION

Quotations

A total of 530 quotations were obtained that described one or more learning experiences. In 72 of these quotations, some explicit reference was made to the sheet with learning experiences, either by interviewer or interviewee; the remaining 458 quotations were spontaneously formulated learning experiences. An average of 35 learning experiences ($SD = 6.9$) were coded per interview. An average of 50 ($SD = 18.6$) quotations of learning experiences were obtained per learning outcome. There was a large difference in the number of times learning experiences were mentioned, ranging from two quotations for *role-play* and *recording* to 114 quotations coded with *experience*. In Table 2 the strengths of associations between the learning experiences and learning outcomes are presented.

Traditional Learning

The learning experiences categorized as *traditional learning* (i.e., *education program*, *module*, *teacher*, *literature*, *other training*, *homework assignments*, and the *exam committee*) contributed, in general, more to development on the *know-how* topics than to the *professional development* topics. There are more and stronger associations in the top left part of Table 2 than in the top right. Almost all *traditional learning* experiences were associated with the learning outcomes *assessment methods/psychological report* and *interventions*. The following quotes illustrate how different kinds of traditional learning have helped the interviewees develop on these topics: “Of course I have learned a lot on interventions in the education program, but which exercises you can use for a specific athlete, I’ve taken that from the literature really” (PP15 on *interventions*, coded with *education program* and *literature*) and “Furthermore I have done . . . apart from the sport psychology courses, [a course on] diagnostics of ADHD and autism and that kind of stuff” (PP5 on *assessment methods/psychological report*, coded with *other training*).

The learning experiences *module* and *teacher* were interrelated, that is, a module and its teacher were often mentioned together. Both were additionally associated with *guiding question of the case/treatment goal*, and the *treatment outline*. PP4 shared, for example, the following:

In the courses by [teachers of the courses intervention techniques and psycho-diagnostics], . . . we were given plenty of guidance in how to approach the intake. And so yes, I have learned how to interview, question, and how to probe of course, and so, yeah there is a learning effect from those classes, and from those experts.

Our finding that modules and teachers provided meaningful learning experiences fits well with the literature. Tod and colleagues (Tod, Andersen, & Marchant, 2009; Tod & Bond, 2010; Owton et al., 2014) highlighted the role that teachers fulfill as external sources of expertise and useful interaction. They concluded that teachers may be particularly important in early career development when trainees still lack internal sources to draw from and seek role models to copy. Moreover, they suggested that professional elders can help trainees cope with insecurities. We found associations between the topic *referral and fear of ineffectiveness* and the learning experiences *module* and *teacher*, suggesting that the teaching in the program had indeed helped interviewees with their fear of being ineffective.

Most *traditional learning* experiences seemed only of limited value for learning how to establish or adapt a treatment plan. Moreover, there were only a limited number of associations

between *traditional learning* experiences and *professional development* topics. Associations were found between learning from *literature* and *coping with the athlete's environment* or *motivation*. PP8, for example, stated (concerning *coping with athlete's environment*): "I've read about that myself, about sports parents." Tod and colleagues (Tod et al., 2009; Tod et al., 2007; Tod & Bond, 2010) suggested that trainees can find solace in learning about the developmental issues of peers. This suggestion was echoed by the responses of the interviewees. PP8, for instance, reflected the following:

What helped me most . . . I remember that we read articles about how in the beginning you are reasonably insecure and want to hold on to the fixed things that you learned. I read articles about that and realised that that was actually very normal.

Throughout the program, students were required to study theory and literature. The interviewees reported that literature had been helpful for them to develop (specifically on *assessment methods/psychological report, interventions, coping with athlete's environment, and coping with athlete's motivation*). However, the interviewees were rather precise on what was helpful or not helpful. Their reflections on literature resonate well with Tod et al.'s (2007) conclusion that theory and research is found useful when trainees can directly apply them.

Other training was associated with *business operations*. PP8 explained:

I took a business boot camp a couple of weeks ago, and that was, well, a very "American style" happening, but it gave me a lot of new insights on how to do acquisition of clients. What should your website look like? How do you get customers to come to you? It may sound very corporate, but every sport psychologist that graduates is, in principal, an entrepreneur.

Interviewees often reported on *business operations* that they had not developed (enough) and gave the advice to include more on this topic in the program. This critique on training has been reported more often in the literature (e.g., Owton et al., 2014; Tod et al., 2009). The results illustrated that interviewees used additional training to fill in the gaps that the program left unfilled and that they found additional training to be useful for extending or strengthening know-how gained in the program (specifically *assessment methods/psychological report* and *interventions*). Similarly, a neophyte sport psychologist shared that she took additional training in rational emotive behavior therapy, motivational interviewing, and solution-focused approaches (Collins et al., 2013).

Overall, it can be concluded that the *traditional learning* experiences *module, teacher, literature, and other training* were useful according to novice consultants. These learning experiences contributed particularly to practical know-how, such as establishing the guiding question, treatment goals, and outline and applying assessment methods and interventions.

Learning Through Practical Experience and Reflective Activities

The actual work with clients, and reflective activities such as *supervision* and *reflective practice*, are intertwined learning experiences. McEwan and Tod (2014) described this as "practice-reflection-practice" and aptly noted, "Experience alone . . . is not enough. Professional experience is used as a guide to competence by the presence of a deliberate practice feedback system: interacting with a client and then engaging in active reflection, [and] supervision" (p. 86). The learning experiences in the category *practical experience and reflective activities* were mentioned often and were associated with a broad range of topics, including both *know-how* and *professional development* learning outcomes (see Table 2).

Interviewees referred to practical experience in four slightly different ways: in general, without much further elaboration (code *experience*, e.g., stating that they learned through client contact hours, by doing); the experience gained as part of the casework within the program (code *casework*); adapting or personalizing methods and techniques they were taught (code *individuation*); and *experimenting*. All these forms of gaining practical experience were found helpful, as illustrated by the following quotes:

So eventually you start moulding yourself and checking, like: okay what suits me as a person and you build that into a kind of treatment plan that you subsequently use per person and shape further. (PP11 on *treatment outline*, coded with *individuation*)

My last case [in the program]. That was a ski jumper with fear issues and we went to work with that and we made progress, but . . . it's not entirely, well, it wasn't top notch, let's put it that way. Certainly not concerning the result. However they were satisfied enough. So that can also be a criterion. (PP13 on *referral and fear of ineffectiveness*, coded with *casework*)

The responses from clients (code *response client*) was a component of practical experience to which interviewees specifically referred. The way clients react and the feedback they got from them helped the interviewees deal with fear of ineffectiveness and develop a balanced consulting style. PP1, for instance, shared, "When you provide the athlete with a whole lot of information and question marks appear in their eyes, then you start thinking, hey, okay he doesn't get it right now and I am too active myself in giving information."

As highlighted previously, practical experience and reflection are coupled learning experiences. In our setting, the *casework* experiences of the interviewees were coupled particularly to *supervision*. Both were associated with *the guiding question of the case*, to *balance client-led/directive counselling*, and *coping with athlete's motivation*. For other learning outcomes the association with *casework* was stronger than with *supervision* (e.g., *coping with athlete's environment*), or vice versa (e.g., *coping with boundary issues*). It thus seems that although the actual work with athlete clients (code *casework*) and the discussion of, or reflection on, that work with a supervisor (code *supervision*) went hand in hand, they also offered different contributions to professional development of trainees. The following quotes illustrate the contribution of *supervision*, or a combination of *supervision* and *casework*:

The supervision sessions. In a number of the seven cases we had to complete, I have, in consultation with the supervisor, adapted the plan. So I brought it up myself, like: well I have the idea that I should do this and that, and then we talked about it [in supervision] and then it was explained to me that that is ok [adapting the plan], as long as you can justify it and know why you are adapting. I still do that now. (PP15 on *adapting treatment plan*)

Again supervision. . . . So more about role confusion, ambiguity, etcetera, isn't it? How far. . . how far do you go, till what point do you let people in, etcetera? . . . So well, yes, supervision has helped me develop a certain attitude towards that [boundaries], I reckon. (PP6 on *coping with boundary issues*)

In addition to supervision, interviewees reflected by themselves on their practical experiences and development (code *reflective practice*). This kind of self-reflective practice mainly contributed to *professional development* learning outcomes (e.g., *session management*, *balance client-led/directive counseling*, and *personal thoughts and feelings*). PP12, for instance, became aware of a disbalance in her counseling style through reflection:

It's that you start realising like, hey, I act in a certain way . . . yet I am not happy with that, and then I try something else and reflect on that . . . and at a certain point in time you have marked out your personal frame through reflective practice.

The importance of practical experience, supervision, and reflective practice has also been stressed in the existing literature, in personal accounts of supervised practicum experiences (e.g., Cropley, Miles, Hanton, & Niven, 2007; Holt & Streat, 2001; Tonn & Harmison, 2004), reflections of practitioners (e.g., Collins et al., 2013; Lindsay et al., 2007; Simons & Andersen, 1995), or studies of learning experiences (e.g., McEwan & Tod, 2014; Tod, Andersen, & Marchant, 2011; Tod & Bond, 2010; Tod et al., 2007). These findings, and ours, suggest that it is important to train students in reflective practice. Students from our program were trained to use the reflective cycle of Korthagen and Vasalos (2005). Other models in the literature include Anderson et al.'s (2004) model of guided reflection (as cited and used in Cropley et al., 2007), Boud's (2001) reflective learning model (as cited and used in Woodcock et al., 2008), critical incident reflection (Tripp, 1993, as cited and used in Holt & Streat, 2001), Gibbs's (1988) six-stage cyclic framework (as cited in Knowles, Gilbourne, Tomlinson, & Anderson, 2007), and treatment fidelity frameworks (Bellg et al., 2004, as cited and used in Lindsay et al., 2007).

Role-play was mentioned only twice in the interviews. This is surprising because role-play has previously been indicated as a useful learning experience (e.g., Tod et al., 2009; Tod et al., 2007). In line with our results, however, McEwan and Tod (2014) reported that role-plays were mentioned more by clinical and counseling psychologists than by sport psychologists. They hypothesized that this was because sport psychologists in their study were trained outside of a structured program. Our interviewees, however, were trained in a program, and in a large number of classes role-plays were used. It is worthwhile to critically evaluate the ways that role-plays were structured, executed, and evaluated in the classes. Overall, it can be concluded that *practical experience and reflective activities* contribute to the full scope of learning outcomes studied.

Learning From Others

Others (e.g., fellow students, colleagues) were relevant sources for learning, particularly for *professional development*. Others appeared less influential on development of *know-how*; there are stronger associations in the bottom right part of Table 2 than in the bottom left. Interviewees had learned from colleagues and fellow students in various ways. The experiences of these others provided "vicarious experiences," as illustrated by PP7 (on *coping with boundary issues*): "I didn't experience that yet, but . . . a class mate raised it in a conversation . . . and that shaped it for me." In addition, others provided useful feedback and guidance. As an example, PP13 shared (on *referral and fear of ineffectiveness*), "Consulting with colleagues, when you are in doubt of a case present it to them: right, what seems to be at play here? Am I capable enough for this? And what if . . .?" These findings are in line with Owton et al. (2014). In their sample, one trainee encountered depressive symptoms of an athlete-client and struggled with referral and detaching herself. The experience of this trainee raised awareness of these professional issues for the whole group of trainees. Moreover, Owton et al. highlighted the function of feedback from peers by sharing an example of how one trainee remotivated himself as a consequence of feedback from his peers.

Colleagues were mentioned more often than fellow students as sources to learn from, especially in association with the *know-how* learning outcomes. Students all obtained similar practical know-how within the program. Therefore there may not be as much to learn from

fellow students compared with professionals outside of the program. Moreover, after graduation, there are no longer teachers, supervisors, and fellow students to learn from. Interviewees may have actively sought input and advice from colleagues to substitute the discontinued learning from the program. The usefulness of collegial advice has also been addressed in the literature. Consultants who had recently finished British Psychological Society accreditation strongly advised peers to seek advice from (more experienced) colleagues (Eubank, 2013). Moreover, seasoned consultants shared how they valued collegial advice and support in their (ongoing) professional development (e.g., Fifer, Henschen, Gould, & Ravizza, 2008; Simons & Andersen, 1995).

Peer consultation is a formalized setting to learn from others. Usually, peer consultation is centered around a challenging situation or incident of one of the participants. *Peer consultation* was mainly associated with the *professional development* learning outcomes. PP8 shared how *peer consultation* had helped her (*coping with boundary issues*): “It’s been very valuable for me to talk with others about it [in peer consultation] and reflect like, this cannot go on like this. Okay what do we do now? I want to, indeed, communicate my boundaries.” Tod et al. (2007) and McEwan and Tod (2014) reported that peer consultation was useful for professional development but that the contribution of social interaction between peers was mentioned more frequently and that organizing peer consultation required a proactive approach. In our setting, regular peer consultation is obligatory for accreditation. This obligation promotes and facilitates participation in peer consultation in our sample, which subsequently was found useful for learning, particularly on *professional development* learning outcomes.

Learning from fellow students, colleagues, and peer consultation takes place within the field of sport psychology. In addition, interviewees learned from people outside sport psychology, for instance, partners, friends, and colleagues in other work settings. PP2 shared how she attended young professional meetings to meet people outside of sport psychology and learn about *business operations*. A relative of PP10 is a doctor and she had “many ethical discussions with him. So indeed like what do you take home with you and what not, and what do you talk about at home and how do you cope with confidential things.”

Other people, from within and outside the classroom, and within and outside the field of sport psychology, were valuable sources for learning, particularly on *professional development* topics. Other people (e.g., peers, colleagues) may complement personal experience by providing vicarious experiences and enhance or extend reflective activities by providing feedback, different perspectives, and peer consultation.

Concluding Remarks

In the current study we related learning experiences to learning outcomes. Overall, the patterns of associations suggested that *traditional learning* experiences are most useful for development on *know-how* topics. *Know-how* is further developed, sharpened, and extended through application and reflection. *Learning from others* may be of limited value for mastering *know-how*. Gaining experience and undertaking reflective activities seemed indispensable for development on *professional development* learning outcomes. In addition to learning from experience and reflective activities, *learning from others* complemented or honed *professional development*. The *professional development* topics were less associated with *traditional learning*.

An important limitation of the study is that it is retrospective in nature. Novice consultants were asked which learning experiences they found, in retrospect, useful. This line of inquiry enabled interviewees to reflect on their learning process as a whole, because they had a little “distance” to their formal training and had gained other learning experiences outside of training

as well. As a downside, however, the study relied on the recall of the interviewees; learning experiences that may have been very helpful in early training, but not later, may have been obscured.

The current study adds to the existing body of literature on professional development and learning experiences as it investigated specifically to which learning outcomes the various learning experiences contributed. Previous research (McEwan & Tod, 2014; Owton et al., 2014; Tod et al., 2009, 2011; Tod et al., 2007; Tod & Bond, 2010) investigated which learning experiences were useful for developing sport psychologists in general. The findings of the current study offer insight into the specific contribution of learning experiences to specific learning outcomes and may as such aid, substantiate, or otherwise improve curriculum development and training efforts for sport psychology practice.

The results of the study are currently used to critically evaluate the learning activities in the program where the study took place. Specifically, we aim to better align the learning experiences with the intended learning outcomes of courses in the program. We found that novice consultants had learned from *traditional learning* experiences, especially for development of *know-how*. This finding suggests that formal education and structured programs for sport psychology practice are important. Fortunately, the number of countries in which formal and structured programs are available is growing, as is the information on these programs (e.g., Hutter, van der Zande, Rosier, & Wylleman, 2016; Sachs, Burke, & Schweighardt, 2011). Moreover, the study illustrated the importance of practical experience, ideally coupled with reflective activities, for all learning outcomes. It thus seems advisable for trainees and educational institutions to invest in training of reflective skills of trainees and in high-quality supervision. The findings may also substantiate accreditation systems in which (supervised) practical experience/contact hours are required. Finally, we recommend trainees and novice consultants to take advantage of professional networks whereby others can provide valuable learning experiences, mainly for *professional development*.

FOOTNOTES

¹One European credit equals 25–30 hr of study load; a full-time academic year typically consists of 60 European credits.

²In case a learning experience is mentioned only in relation to one specific topic, the probability that that specific learning experience contributes to that developmental topic cannot be calculated. In these cases the denominator is zero, because the learning experience is not mentioned for other developmental topics.

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