

Development of a Questionnaire Focused on Sports Coaches Learning

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ABSTRACT

Coaching is one of the most demanding social, helping and pedagogical professions. Therefore, research attention is rightly paid mainly to formal coach education aiming at adequate preparation for the practice of this profession. In recent years, however, many empirical studies have demonstrated that non-formal coach education is playing an increasingly important role in coach development in addition to formal coach education. At the same time, research findings show that it is not only the completed “official” coach education that is crucial for the professional development of each coach, but above all, it is the complex results of their lifelong learning. Therefore, it is essential for various sports institutions, for sports educational facilities, especially for coach educators, to have information about the course, features, and potential problems related to lifelong learning of specific sports coaches. Therefore, our paper aims to create a research tool – a questionnaire that identifies the essential circumstances of lifelong coach learning. The design of the questionnaire builds on our previous research on formal, non-formal and informal coach education and, in particular, on the results of many analogous international empirical studies on coach learning. These starting points show that the following areas play an essential role in the lifelong learning process of coaches: (1) personal sports and coaching experience, (2) reflection (self-reflection) of this experience, (3) professional sharing of coach experience, (4) mentoring and (5) accessible and understandable coach learning information resources. We prepared a working version of the questionnaire based on the above principles. This research tool aims to identify sports coaches’ learning and education processes. We designed the questionnaire containing 66 items (closed, open, semi-closed, and scales) to suit various respondents – coaches (multiple types of sports, competitive and recreational sports, different age groups, beginners and experienced coaches, etc.). With the help of experts, the questionnaire and the validation

process was designed in the Czech language and took place in the Czech sports environment. The first stage of verifying the draft version of the questionnaire consisted of an expert assessment. A total of 6 active coaches (three male coaches and three female coaches from the environment of top, competitive and hobby sports), who were acquainted with the theoretical basis of the questionnaire, recommended minor corrections to the questionnaire. The second stage of the questionnaire verification took place in interviews with six coaches (again working in competitive and leisure sports) who were not acquainted with the theoretical basis of the questionnaire. This stage focused on the clarity and unambiguity of individual items. The revised questionnaire was subsequently converted into an electronic form. The functionality of the final electronic version of the questionnaire was verified within a pilot study (n = 18).

Keywords: coaching knowledge transfer; informal coach education; peer-to-peer learning; mentoring; professional sharing

INTRODUCTION

Quality performance in any activity is primarily related to human learning. Empirical research focused on learning and education is intensively devoted to human activities (professions), the successful performance of which, due to its complexity, requires a vast amount of adequate competencies, i.e. not only knowledge and skills but also attitudes and incentives. Many kinds of research are therefore devoted to the issue of learning and education for complex social professions, e.g. teachers (Šeďová et al., 2016; Švaříček, 2011) or doctors (Alshok, 2016, p. 792).

The demanding social, helping, and educational professions also include coaching. In coaching, the focus is mainly on licensed coach education. The definition of this education is a process in which future or current coaches learn to coach (Trudel & Gilbert, 2006, p. 516). Coach education should ensure adequate preparation for successful coach practice. It turns out, however, that in sports coach education (especially in the Czech Republic), formal education with a transmissive conception still prevails (Kovář, 2011). However, numerous global researches document that in addition to formal (licensed) education, nonformal education also plays an increasingly important role in the necessary coach professional gradation (Mallett et al., 2009; Martens, 2006; Nelson, Cushion, & Potrac, 2006). Research findings (McCarthy, 2020) further demonstrate that the performance of coaches is not determined only by their completed coach education. The coach activities reflect the complex results of their lifelong learning, i.e. all forms of organized and, at the same time, individual coach education and autonomous learning.

Research on coach learning, which fits into the broader framework of adult learning and education, can be based on various theoretical concepts. A constructivist approach is currently predominant in the study of coach learning and education (Leduc, 2012, p. 4). He describes learning as a process in which the learner constructs his experiences. Our experiences are the constructs of our perception and awareness of the world, and we primarily learn from these experiences.

Empirical research focused on the lifelong learning processes of coaches (e.g. McCarthy, 2020) identifies many significant areas in the professional gradation of coaches. It turns out that effective

forms of learning, especially for coaches, consist of a whole range of individual and social activities. These are mainly the following areas:

1. gaining personal sports and coach experience,
2. reflection and self-reflection of these experiences,
3. professional sharing of coach experiences,
4. mentoring and
5. effectively use accessible and understandable information resources for coach learning.

(1) Personal sports and coach experience

Personal and professional experience is significant in coaching or the whole complex of complex social, helping and incredibly educational professions. Analogously to coaches, teachers help other people in their development. They consider their practice the most significant source of their professional theory. "The main principle behind a teacher's educational theory is his experience that it works" (Švaříček, 2009, p. 317). Teachers compare old and new knowledge to see if the newly created solutions match the authentic experience. Teachers primarily rely on their personal experience, "only when they encounter a problem do they seek advice from their colleagues" (Švaříček, 2009, p. 319).

The professional activities of coaches are also primarily based on personal sports experience. These experiences come from one's own sports career, reflect positive or even negative experiences with their coaches and are gradually supplemented by the acquired coach experience. These three aspects significantly influence novice coaches' work and, as documented by the case studies of excellent sports coaches (e.g. Jones et al., 2004), are also crucial for expert coaches. The importance of coach experience is reflected in decision-making on specific coaching issues, and the most experienced coaches can choose the assumption of a strategic coordination role (Vergeer & Lyle, 2009).

The interviewed coaches further believe that coach experiences include practical day-to-day coaching and many other aspects of a coach's life (Mc Carthy, 2020, p. 44). Experience with own coaching is incredibly vital. For example, many research participants reported that their time as a coach provided them with opportunities to improve their coach skills. "I think I'm always getting better as a coach through experience" (Greenberg & Culver, 2020, p. 22).

(2) Reflection and self-reflection of experiences

Research shows that coaches learn especially in such a way when they reflect on coaching experiences from practice (Gilbert & Trudel, 2006). Therefore, reflection on the coaching experience is a crucial element of coach education (Cushion et al., 2003). At the same time, reflection offers a conceptual framework for connecting and understanding coach education, theory and practice (Nelson & Cushion, 2006). Reflection and self-reflection, as a vital part of a coach's learning, can take place, for example, by sharing ideas and experiences in peer group learning or using challenging questions posed by a mentor (Mc Carthy, 2020). Coaches above all appreciate this way of learning. On the contrary, they often criticize the mandatory completion of formal coach education precisely because these courses for coaches do not reflect their everyday coaching experience.

Deliberate reflection can play a significant role in the professional development of coaches. In this case, experienced coaches intentionally set aside more time to reflect on their coaching practices (Greenberg & Culver, 2020).

(3) Professional sharing of coach experiences

Armour (2011) emphasizes that for coach education and learning effectiveness, it is essential if coaches can collaborate and share information with other colleagues as part of their development. In this way, communities of practice can be created, which Culver and Trudel (2006, p. 98) characterize as a group of people - sports coaches who share a common interest, set of problems or passion for a specific topic and who deepen their knowledge and expertise in this area through ongoing interaction.

In particular, peer learning develops within these professional communities, i.e. learning “taking place between two or more persons who are not in a mutually hierarchical relationship” (Brücknerová, 2021, p. 13). Peer learning promotes friendly relationships and is used in human resource management in organizations. Today, peer learning is primarily associated with user forums and social networks. Peer learning develops communication and interaction, which coaches greatly value in their professional development (Greenberg & Culver, 2020). The cooperation of coaches and their shared reflection facilitate coaches’ learning and, thus, a supportive coaching environment (O’Dwyer & Bowles, 2021).

McCarthy (2020) states that even if some coaches are not explicitly involved in communities of practice, they use peer-to-peer learning, which is a very effective way of learning for them. Involvement and engagement in contacts with other world experts are especially typical for globally successful coaches (McCarthy, 2020, p. 44).

(4) Mentoring

Today, not only sports unions and associations or sports faculties participate in the lifelong learning of coaches. Sports clubs and sports centres must also actively support the education and learning of their coaches. Within this “club” education, mentoring plays a key role, where experienced coaches pass on their knowledge to younger colleagues. Mentoring is now widely advocated as an essential part of coach learning, both informally and as a constituent feature of coach development programmes (Bailey et al., 2019). The coaching environment thus increasingly becomes not only a place where athletes learn. However, more recently, it has also begun to be a place where coaches’ professional learning and development take place (Cushion, 2006).

At the same time, mentoring is related to the requirements of coaches who prefer learning through informal ways in their development. Mentoring can be a typical example of such learning. Mentoring is effective because coaches learn within a social and cultural construct and gain experience through interactions with coaches-mentors (Cushion, 2006). Mentoring is more than just imparting technical knowledge and coaching tips. The entire process involves observing the practitioner and “...imitating and reflecting on coaching practices” (McCarthy, 2020, p. 38).

Jones et al. (2009) point out that mentoring on a general and specific level – i.e. within sports coaching – is challenging to define. An effective mentoring program will mainly consist of a number of the following elements:

- It is formalising the mentoring relationship and developing the ground rules and expectations for the relationship.
- It is identifying the needs of the person being mentored at the beginning of the relationship.
- They are setting goals for the mentoring experience and periodically checking that these goals are being met.

- It provides a challenge for both the mentor and coach.
- It is flexible in the degree of formality involved in the mentoring programme.
- It provides training for mentors. In this context, mentors should have the opportunity to share their experiences.
- Mentoring is a fluid and dynamic process requiring patience.
- The degree of mutual trust between mentor and mentee appears necessary for a successful mentoring relationship.
- The mentoring process should be facilitative and nurturing, not allowing mentors to dominate (Jones et al., 2009, p. 281).

At the same time, the key condition for an effective mentoring relationship is terms of trust (Bailey et al., 2019, p. 81).

Mentoring is traditionally understood as a collegial relationship between two individuals – a mentor and a mentee. In the elite sport environment, the use of multiple mentoring is now recommended, and specifically to enhance bespoke mentee development (Sawiuk et al., 2017, p. 411).

Lefebvre et al. (2021) state that mentoring can fulfil other functions beyond the traditional conceptualizations of mentoring, e.g., protect coaches from threats to their job security (i.e. protection from adversity), serve as role models, and contribute to their career advancement via employment opportunities.

(5) Accessible and understandable information resources for coach learning

Knowledge transfer, i.e. the transfer of scientific information into practice, is key in every professional activity, i.e., coaching. Its essential part consists of accessible and understandable information resources for coaches learning. The history of sports proves that when it was possible to transfer the results of science into a coaching practice effectively, athletes achieved excellent results. For example, we can recall the phenomenal results of athletes in ancient Croton in the years 588-488 BC. At that time, athletes from Croton won more than 20 Olympic victories. In Croton at this time, a unique symbiosis of philosophy and science (Pythagoras and his followers), especially medicine and sports, arose, creating extremely stimulating conditions for developing an original coaching concept. This situation may explain that in this century, athletes from Croton were better than representatives of other ancient Greek city-states (Mann, 2001). The effective use (unfortunately, often misuse) of sports knowledge undoubtedly contributed to the extraordinary results of the athletes of the former Soviet Union at the beginning of the second half of the 20th century. Bourne (2016, p. 67) aptly described these sporting achievements as the rise of the “Heavy Red Sports Machine”.

Coaches currently have more extensive information resources (primarily English-language scientific literature available in cyberspace). However, research results show that a specific problem of coach learning is the “gap” between the findings of sport and movement sciences and coaching practice (Esteves et al., 2010; González-Rivera et al., 2017; He et al., 2018; Kubayi et al., 2019). The stated situation can thus deepen the paradox that the amount of available knowledge (relevant scientific knowledge) coaches do not need to reflect in their learning, which should mainly develop their professional competencies. Therefore, various intervention strategies to strengthen and facilitate the transfer of scientific knowledge into coaching practice must also participate in the adequate development of coach education and learning.

Effective transfer of the latest knowledge, i.e. the scientific understanding of the sport and movement, into coaching practice thus constitutes a crucial requirement for the effective learning of all coaches. Çelik (2020) reminds us that sports and sports education existed primarily in practical activities for a very long time, i.e. all participants in sports and sports education are physically present. However, times have changed dramatically, especially in sports education, and computer technologies have firmly established themselves. In this context, the concept of e-learning today represents a significant trend that will continue to develop dynamically. Mainly, the covid-19 epidemic significantly contributed to this development in sports education. E-learning in the field of sports sciences is more focused on individual participants (Çelik, 2020) and constitutes an essential source of learning, especially for coaches.

Currently, substantial sources of informal learning for sports coaches are textual and visual information, especially videos on the Internet (Koh et al., 2018). Current professional knowledge, especially in sports and movement sciences, is thus primarily available via the Internet, most often in English. The language competence of the coaches, especially their active knowledge of English, can thus form one of the significant obstacles in their learning (He et al., 2018).

Effective transfer of knowledge is also a significant task for coach educators. They must develop support structures that enable coaches to identify better and use quality information sources. The goal is to create a supportive social environment that will contribute to coaches' learning so that their informal development is sufficiently open, reflexive and critical (Stoszowski & Collins, 2016).

The professional development of coaches is a multi-layered complex of formal, nonformal and informal education and learning. In particular, the learning processes of the coaches themselves are of key importance in this process. Werthner and Trudel (2006) defined the typical so-called learning situations of sports coaches. They emphasized that in the practice of coach education, there is no significant polarization between cases of directed learning (primarily within formal courses for coaches) and undirected learning (e.g. during discussions with other colleagues). At the same time, they emphasized the importance of reflection using quality teaching materials, i.e. external experience or internal experience, i.e. empiricism, which already forms the cognitive structure of the learning coach. Respecting the importance played by all three types of learning situations mentioned should influence the development of coach education. Special efforts should be made to develop materials for coaches that are relevant to them and ensure that qualified teachers and instructors effectively distribute them. Facilitating indirect learning situations for coaches is less obvious but still significant. Coaches and their educators should realize that indirect learning situations do not always have to be random. "Coaches can seek out and even create these situations themselves, and sports organizations should support them in these activities" (Werthner & Trudel, 2006, p. 209).

METHODS

The stated starting points show that many aspects, conditions and processes play a significant role in the lifelong learning process of coaches. Therefore, it is essential for various sports institutions and sports educational facilities, especially coach educators, to have information about the course, features, areas, and potential problems related to the lifelong learning of specific sports coaches.

Therefore, our paper aims to create a research tool – a questionnaire that identifies the essential circumstances of lifelong coach learning.

The stated starting points show that individual sports and coaching experience, reflection and self-reflection of these experiences, professional sharing of coaching experiences, mentoring and quality information resources for coach learning play an essential role in the lifelong learning process of coaches. In this context, we are next to the main research question – How do sports coaches learn? – formulated five secondary research questions. These questions specifically focus on the five areas listed above.

The construction of the questionnaire follows, on the one hand, Czech research on formal, non-formal and informal coach education and learning (Jůva & Tomková, 2010; Gállová & Jůva, 2018; Kotlík & Jansa, 2020). The main starting points for creating the questionnaire were international theoretical and overview studies and the conclusions of empirical research on coach learning. A brief overview of them provides the introduction of this article. Pervasive empirical research by Nelson (2010), namely questions for interviews with coaches (Nelson, 2010, p. 208) and a questionnaire (Nelson, 2010, p. 210–215), had a concrete methodological contribution to the creation of the described questionnaire.

We prepared a working version of the questionnaire based on the above principles. This research tool aims to identify sports coach learning and education processes. We designed the questionnaire containing 66 items (closed, open, semi-closed, and scales) to suit various respondents – coaches (male and female, beginners and experienced coaches, multiple types of sports, competitive and recreational sports, and different ages groups, etc.).

The first stage of verifying the draft version of the questionnaire consisted of an expert assessment. A total of 6 active coaches (three male coaches and three female coaches from the environment of top, competitive and hobby sports), who were acquainted with the theoretical basis of the questionnaire, recommended minor corrections to the questionnaire.

The second stage of questionnaire verification took place in the form of interviews with six coaches (again, three female coaches and three male coaches) working in elite sports, performance sports and sports for health who were unfamiliar with the questionnaire's theoretical basis. This stage focused on establishing the comprehensibility and clarity of individual items. In this phase, we tested the wording of the questionnaire questions in a probe using an interview (Gavora, 2010, p. 124). Respondents were tasked with explaining whether they understood each question and how they understood it. Only a few minor corrections resulted from this probe. At the same time, this phase found that less than 5% of the responses selected were N – Don't Know in the range of scaled items.

The revised working version of the questionnaire was subsequently converted into an electronic form in the Google Forms environment (<https://docs.google.com/forms>), which enables the export of results to MS Excel and other statistical programs. The functionality of the final electronic version of the questionnaire was verified within a pilot testing, with the participation of 18 respondents. The technical validation of the instrument was carried out without any problems.

RESULTS

On the basis of an extensive literature study of conducted and published research in our area of interest, we identified 5 areas related to the process of coach education. We then constructed our research instrument around these sections.

The first section reflected **(1) Personal sport and coach experience** (Švaříček, 2009; Jones et al., 2004; Vergeer & Lyle, 2009; Mc Carthy, 2020; Greenberg & Culver, 2020). We designed complex questions, primarily capturing the development of one's own coaching practice from education to consideration of one's own sport experience.

(2) Reflection and self-reflection of experiences was the second section of our instrument (Gilbert & Trudel, 2006; Nelson & Cushion, 2006; Mc Carthy, 2020; Greenberg & Culver, 2020). It appears that the coaches' expertise develops especially when they reflect on coaching experiences. Reflection also provides a conceptual framework for connecting and understanding the relationship between theory and practice. **(3) Professional sharing of coaching experiences** is a powerful tool for coaching gradation (Armour, 2011; Culver & Trudel, 2006; Bruckner, 2021; Greenberg & Culver, 2020; O'Dwyer & Bowles, 2021; Mc Carthy, 2020). For coach education and learning to be effective, it is essential that coaches are able to collaborate and share information with other colleagues as part of their development. In this way, professionally focused communities can emerge. Today, peer learning is mainly associated with user forums and social networks.

Informal activities of sports clubs and individuals are increasingly involved in the lifelong learning of coaches. For this reason, we have created and included section **(4) Mentoring** (Bailey et al., 2019; Cushion, 2006; Mc Carthy, 2020; Jones et al., 2009; Sawiuk et al., 2017; Lefebvre et al., 2021). Thus, the coaching environment is increasingly becoming more than just a place where athletes learn. More recently, however, it is also becoming a place where professional learning and development for coaches takes place. At the same time, mentoring is related to the requirements of coaches who prefer learning through informal ways for their development. Mentoring can be a typical example of such learning. It is effective because coaches learn within a social and cultural construct and gain experience through interactions with coaches-mentors.

The last section of the developed tool **(5) Accessible and understandable information resources** for coach learning alludes to the situation that a specific problem of coach education is the „gap“ between sport and exercise science knowledge and coaching practice. It turns out that not all research results are understandable for coaches. This is particularly reflected in the fact that for some coaches, ‚scientific language‘ and active knowledge of English is a limiting barrier to their professional gradation (Mann, 2001; Bourne, 2016; Esteves et al., 2010; González-Rivera et al., 2017; He et al., 2018; Kubayi et al., 2019; Çelik, 2020; Koh et al.) In this section, the questionnaire asks to what extent trainers use Czech and English written information sources, whether they actively participate in conferences, workshops, video lectures, search for information in professional journals, and so on.

After identifying 5 sections, we created specific questions and had 6 experts (coaches) from the sports environment (3 male and 3 female coaches from top, competitive and recreational sports) to assess these. Based on their recommendations, we made minor adjustments to the questionnaire, especially in the areas of education, the use of electronic educational materials and social networks

for sharing experiences (for example: not all coaches passed the matriculation exam, drawing information from podcasts and audiobooks...). The second phase of the questionnaire validation took the form of interviews with six coaches (again working in competitive and recreational sport) who were not familiar with the theoretical basis of the questionnaire. This phase focused on the clarity and unambiguity of the items. The revised questionnaire was subsequently converted into electronic form. The functionality of the final electronic version of the questionnaire was verified in a pilot study ($n = 18$). It should be noted that this was a validation of a research instrument, not empirical research per se.

The final product was the design of our research instrument. The created questionnaire contains five parts. In the first part, 14 items determine primary personal and professional data, educational attainment, and personal sports and coaching experience. The second part of the questionnaire is crucial from the point of view of its goals – it ascertains the course and circumstances of coach learning. The 25 items in this section are related to reflection and self-reflection of coaching and others, mainly social, empirics, the way of obtaining professional information, the use of informal coach education offers, the way of solving coaching problems and the sharing of professional experiences. This part further examines the view of coaches on effective coach learning activities or their issues and barriers.

The third part of the questionnaire reflects the cooperation of the addressed coaches with mentors. The 12 items of this part determine specific forms of cooperation between mentor and mentee and, above all, the importance of mentoring in the development of the addressed coaches. The fourth part of the questionnaire examines specific sources of coach learning. Twenty-one items ask about using printed resources, especially the work of coaches with electronic information resources. The final part of the questionnaire ascertains other stimuli for coach learning. These data, focused on future recommendations and proposed measures for coaches, will be necessary, especially for coach educators who work in sports associations, sports faculties, and individual sports clubs.

DISCUSSION

As part of the pilot verification of the questionnaire, we recorded mainly positive reactions from the respondents. The contacted coaches confirmed the importance of their own experience, reflection and self-reflection, and especially mentoring in their professional development. They have expanded the range of learning resources to include some other areas that – from their point of view – play an increasingly important role in coach learning (e.g. audiobooks or podcasts).

Along with Nelson et al. (2013), we hypothesize that coaches who strive to become better practitioners will provide detailed evaluations and recommendations for effective coach education and learning practice when completing the questionnaire.

CONCLUSION

Based on the content analysis of scientific texts focused on the issues of coach learning and education, we created and verified a research tool – a questionnaire – called “How sports male and

female coaches learn to coach". The questionnaire is available in the Czech version in the Google Forms electronic environment (Czech title „Jak se sportovní trenérky a trenéři učí trénovat“). In the following stages of our work, we anticipate the standardization of this questionnaire for the Czech cultural environment and subsequent translation into English. However, we are fully aware of the difficulties associated with the dynamic changes in social reality and the differences in different cultural and linguistic contexts.

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REFERENCES

- Alshok, M., M. (2016). How do Medical Students Learn? *International Journal of Clinical Medicine*, 7(11), 792–799. <https://doi.org/10.4236/ijcm.2016.711085>
- Armour, K. (Ed.). (2011). *Sport Pedagogy: An Introduction for Teaching and Coaching*. Pearson.
- Bailey, J., Jones, R. L., & Allison, W. (2019). Sports Coaches' Mentorship: Experience and a Suggested Future Framework. *European Journal of Human Movement*, 43(2), 67–85.
- Bourne, N. (2016). La montée de la lourde machine du sport rouge et l'avènement de la programmation journalière de l'entraînement moderne [The Rise of the “Heavy Red Sports Machine” and the Advent of Modern Daily Training Programming]. *Staps*, 114(4), 67–77.
- Brücknerová, K. (2021). *Studují spolu. Vzájemné učení mezi vysokoškolskými studenty kombinovaných studií a možnosti jeho podpory*. [Studying together. Peer learning among part-time students in higher education, and support possibilities]. Masarykova univerzita. <http://dx.doi.org/10.5817/CZ.MUNI.M210-9914-2021>
- Çelik, A. (2020). A systematic review on examination of elearning platforms in sports education. *African Educational Research Journal*, 8(2), 292–296. <https://doi.org/10.30918/AERJ.82.20.058>
- Culver, D., & Trudel, P. (2006). Cultivating coaches' communities of practice: developing the potential for learning through interactions. In R. Jones (Ed.), *The sports coach as educator: reconceptualising sports coaching* (pp. 97–112). Routledge.
- Cushion, C. (2006). Mentoring: Harnessing the power of experience. In R. L. Jones (Ed.), *The sports coach as educator: Re-conceptualising sports coaching* (pp. 128–144). Routledge.
- Cushion, C. J., Armour, K. M., & Jones, R. L. (2003). Coach Education and Continuing Professional Development: Experience and Learning to Coach. *Quest*, 55(3), 215–230.
- Esteves, D., Pinheiro, P., Brás, R., Rodrigues, R., & O'Hara, K. (2010). Identifying knowledge transfer problems from sport science to coach practice. In *Proceedings of the European Conference on Knowledge Management* (pp. 375–385). ECKM.
- Gálllová, T., & Jůva, V. (2018). Rozvoj neformálního vzdělávání sportovních trenérů [Development of non-formal sports coach education]. *Studia Sportiva*, 12(2), 122–135.
- Gavora, P. (2010). *Úvod do pedagogického výzkumu* [Introduction to pedagogical research] (2nd ed.). Paido.
- Gilbert, W., & Trudel, P. (2006). The coach as a reflective practitioner. In R. L. Jones (Ed.), *The sports coach as educator: Re-conceptualising sports coaching* (pp. 113–127). Routledge.
- González-Rivera, M., Campos-Izquierdo, A., Villalba, A. I., & Hall, N. D. (2017). Sources of knowledge used by Spanish coaches: A study according to competition level, gender and professional experience. *International Journal of Sports Science & Coaching*, 12(2), 162–174.
- Greenberg, E., & Culver, D. M. (2020). How Parkour Coaches Learn to Coach: Coaches' Sources of Learning in an Unregulated Sport. *Journal of Adventure Education and Outdoor Learning*, 20(1), 15–29.

He, C., Trudel, P., & Culver, D. M. (2018). Actual and ideal sources of coaching knowledge of elite Chinese coaches. *International Journal of Sports Science & Coaching*, 13(4), 496–507.

Jones, R. L., Armour, K. M., & Potrac, P. (2004). *Sports Coaching Cultures: From Practice to Theory*. Routledge.

Jones, R., Harris, R., & Miles, A. (2009). Mentoring in sports coaching: a review of the literature. *Physical Education & Sport Pedagogy*, 14(3), 267–284.

Jůva, V., & Tomková, Z. (2010). Cesta k trenérské profesi [The path to the coaching profession]. *Studia Sportiva*, 4(1), 89–100.

Koh, K. T., Lee, T. P., & Lim, S. H. (2018). The Internet as a source of learning for youth soccer coaches. *International Journal of Sports Science & Coaching*, 13(2), 278–289.

Kotlík, K., & Jansa, P. (2020). Sebevzdělávání trenérů z pohledu ekonomického charakteru jejich trenérské činnosti [Coaches Self-education from the Point of View of an Economic Character of their Coaching Activity]. *Studia Kinanthropologica*, 21(2), 159–169. <https://doi.org/10.32725/sk.2020.048>

Kubayi, A., Coopoo, Y., & Toriola, A. (2019). Knowledge Transfer from Sport Science to Coaching: A South African Coach's Perspective. *South African Journal for Research in Sport, Physical Education & Recreation*, 41(1), 51–61.

Kovář, K. (2011). Současné trendy ve vzdělávání trenérů [Current trends in coach education]. *Česká kinantropologie*, 15(3), 11–16.

Leduc, M. (2012). *Analyse de l'apprentissage de formateurs et d'entraîneurs participant au Programme national de certification des entraîneurs* [Analysis of the learning of trainers and coaches participating in the National Coaching Certification Program] [Doctoral dissertation, Université d'Ottawa]. <http://dx.doi.org/10.20381/ruor-5435>

Lefebvre, J. S., Bloom, G. A., & Duncan, L. R. (2021). A qualitative examination of the developmental networks of elite sport coaches. *Sport, Exercise, and Performance Psychology*, 10(2), 310–326. <https://doi.org/10.1037/spy0000254>

Mallett, C. J., Trudel, P., Lyle, J., & Rynne, S. B. (2009). Formal vs. informal coach education. *International Journal of Sports Science & Coaching*, 4(3), 325–334.

Mann, C. (2001). *Athlet und polis im archaischen und frühklassischen Griechenland* [Athlete and polis in Archaic and Early Classical Greece]. Vandenhoeck & Ruprecht.

Martens, R. (2006). *Úspěšný trenér* [Successful coaching]. Grada Publishing.

McCarthy, E. (2020). Understanding how World-Class Competitive Swimming Coaches learn to coach. *Journal of Swimming Research*, 27(2), 49–52.

Nelson, L. J. (2010). *Understanding coach learning*. [Doctoral dissertation, Loughborough University]. <https://hdl.handle.net/2134/9243>

Nelson, L. J., & Cushion, C. J. (2006). Reflection in Coach Education: The Case of the National Governing Body Coaching Certificate. *Sport Psychologist*, 20(2), 174–183.

Nelson, L. J., Cushion, C. J., & Potrac, P. (2006). Formal, nonformal and informal coach learning: A holistic conceptualisation. *Coach*, 2006(35), 59–69.

Nelson, L., Cushion, C., & Potrac, P. (2013). Enhancing the provision of coach education: the recommendations of UK coaching practitioners. *Physical Education & Sport Pedagogy*, 18(2), 204–218. <http://dx.doi.org/10.1080/17408989.2011.649725>

O'Dwyer, A., & Bowles, R. (2021). "I'm valuing the journey as much as the destination": Exploring shared reflection to support novice coach learning. *International Journal of Sports Science & Coaching*, 16(4), 1035–1044.

Sawiuk, R., Taylor, W. G., & Groom, R. (2017). An analysis of the value of multiple mentors in formalised elite coach mentoring programmes. *Physical Education & Sport Pedagogy*, 22(4), 403–413.

Stoszowski, J., & Collins, D. (2016). Sources, topics and use of knowledge by coaches. *Journal of Sports Sciences*, 34(9), 794–802. <https://doi.org/10.1080/02640414.2015.1072279>

Šedřová, K., Švaříček, R., Sedláček, M., & Šalamounová, Z. (2016). *Jak se učitelé učí: cestou profesního rozvoje k dialogickému vyučování* [How teachers learn: Professional development as a way to dialogic teaching]. Masarykova univerzita.

Švaříček, R. (2009). *Narativní a sociální konstrukce profesní identity učitele experta* [Narrative and Social Construction of Expert Teacher Professional Identity] [Doctoral dissertation, Masarykova univerzita]. Information system of Masaryk University. <https://is.muni.cz/th/f128u/>

Švaříček, R. (2011). Zlomové události při vytváření profesní identity učitele [Critical Incidents in Forming the Professional Identity of the Teacher]. *PEDAGOGIKA.SK*, 2(4), 247–274. Retrieved from <https://www.cceol.com/search/article-detail?id=277349>

Trudel, P., & Gilbert, W. (2006). Coaching and Coach Education. In D. Kirk, D. Macdonald, & M. O'Sullivan (Eds.), *The Handbook of Physical Education* (pp. 516–539). SAGE Publications.

Vergeer, I., & Lyle, J. (2009). Coaching Experience: Examining Its Role in Coaches' Decision Making. *International Journal of Sport & Exercise Psychology*, 7(4), 431–449.

Werthner, P., & Trudel, P. (2006). A New Theoretical Perspective for Understanding How Coaches Learn to Coach. *Sport Psychologist*, 20(2), 198–212.

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