MISCIBILITY IN BLENDED APPROACHES TO PETE PRACTICE

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Abstract: In this paper, we discuss findings from a collaborative self-study we conducted on enacting a blended approach (i.e. consisting of online and in-person components) to a Physical Education Teacher Education (PETE) course. Data consisted of reflective journals and recorded conversations. We examine assumptions about the structure, content, and pedagogies of "blended" approaches using the metaphor of miscibility, where liquids mix to form a homogeneous solution. The blended PETE course was not conceptualized or enacted in a way that made it miscible (i.e. it was immiscible), in that the in-person and online components were viewed as separate entities. This meant there were missed opportunities to offer formative experiences from one format to shape experiences in the other. Following the pandemic it will be important to consider the strengths of both in-person and online formats so that students experience the ways one can benefit the other.

Keywords: Physical Education and Training. Metaphor. Professional Training. Education, distance. Self-study.

1 INTRODUCTION

The limitations placed on in-person interactions (sometimes referred to as face-to-face) during the global covid-19 pandemic has meant that digital platforms are now being widely used to facilitate teaching and learning in higher education, to such an extent that some institutions have been using only online or digital environments in place of in-person classes since early in 2020 (MOORHOUSE, 2020). In the early stages of the pandemic, many university teachers were required to identify appropriate structures and pedagogies for teaching in an online environment with little notice, meaning that important pedagogical decisions were being made based on little evidence either from the literature or from personal experience, to the extent that what was being done is perhaps not best described as "online teaching" but rather was a form of emergency remote teaching (GARDNER, 2020).

While the global pandemic has instilled a sense of urgency to locate good pedagogical practices in the online environment, it has perhaps brought to a head the trend toward online teaching (both fully online as well as blended approaches) that was present prior to the spread of covid-19. For instance, Boelens, De Wever and Voet (2017) suggested that a fairly extensive body of research on blended learning (a mix of online and in-person teaching) in educational settings, including in higher education, had already been generated by the early stages of the 21st century. Thus, while many university teachers have dealt with (or are still dealing with) the seemingly rapid shift to online teaching in the past two years and have struggled to identify a strong base for their online pedagogical practice, this should not cloud the fact that there has been an impetus toward online teaching that was occurring prior to 2020, and much of the work done in that area offers important insights into pedagogical decision-making in the digital world. Indeed, it was this impetus that spurred us to consider the utility of blended formats for some of our courses well before the pandemic; an impetus based on several possibilities offered by online teaching and learning combined with traditional in-person formats.

There are a host of reasons why digital and online platforms might be used in higher education, some of which are grounded in the needs and lived realities of students in contemporary education. For example, online and other digital formats are thought to offer students flexibility in how, where, and when they access material (SHEA; PICKETT, 2005). Moreover, as school-based teaching increasingly uses digital platforms for both pedagogical and administrative purposes, undergraduate university students/pre-service teachers can learn about and become familiar with technologies that they may be required to teach with following their certification as teachers (CALDERÓN *et al.,* 2021). However, with any affordances come constraints, and there are some claims that digital platforms not only serve pedagogic purposes but they might also be used due to the demands of neoliberal educational agendas. For example, it is thought that more students can be taught in each class because there are not the same issues related to the physical space and infrastructure needed to teach in traditional classrooms; that is, there is less reliance on "bricks and mortar" (SELWYN; JANDRIĆ, 2020). In the main, it is our position that university teachers who teach future teachers (i.e. teacher educators) and their students should not have

online learning forced onto them but that any shift to online teaching should involve the same sound, reasoned pedagogical decision-making that we assume teacher educators engage with in the in-person environment.

When we designed this research in what now seems like a luxurious position prior to covid-19, we sought to examine our knowledge and enactment of pedagogical reasoning for choosing a blended approach to teaching teachers about reflective practice. In this approach, students would access some course experiences on the university campus in an in-person mode, while other course experiences would be accessed online at a time and place convenient to the students. This was a choice we made that was not imposed by bureaucratic decisions based on ideas related to efficiency and profitability for institutions, nor on the (more justifiable) grounds of a global pandemic; it was a pedagogical choice made based on an idea that a blended approach could enhance the opportunities for student learning beyond what was possible in either an in-person or fully online mode in one particular course taught by Tim. With this in mind, the purposes of this research are to (a) examine our decision-making and experiences of enacting a "blended" approach in one course and (b) to use the insights generated from our experiences to inform future considerations for blended pedagogies.

The shifting landscape of online and blended formats of learning in higher education is evident in teacher education programs. According to Dyment and Downing (2020) there has been a notable increase in the number of studies examining the use of online teacher education in the last five years. Given our positions in Physical Education teacher education (PETE) programs, it is also of interest to note that Calderón *et al.* (2021), Killian, Kinder and Woods (2019), and Koekoek and van Hilvoorde (2018) recognize a smaller but increasing number of studies of online and blended learning in PETE. The embodied and experiential nature of teaching and learning in Physical Education is sometimes difficult to reconcile with online learning formats, however, there is evidence of teaching and learning in Physical Education through video (O'LOUGHLIN; NÍ CHRÓINÍN; O'GRADY, 2013), exergames (STAIANO; CALVERT, 2011), flipped approaches (ØSTERLIE; KJELAAS, 2019), and virtual reality (NEUTZLING; RICHARDSON; SHEEHY, 2018). While new possibilities in Physical Education are afforded through online and other digital approaches, we believe that there remains a general reluctance in Physical Education to adopt new technologies Lu, Barrett; Lu (2020) and O'Brien *et al.* (2020) note that in PETE, covid-19 may have forced the hand of many teacher educators who cling to traditional practices so they may embrace the strengths afforded by digital platforms, such as the potential for increased efficiency, student motivation, access to archived learning materials for learning and assessment, and engaging with new and innovative ways of interacting with the self, with others, and with material and non-material resources (SARGENT; CASEY, 2021). However, if these types of approaches are to take hold when (and if) in-person teaching and learning returns as the preferred format in universities, teacher educators will want to understand both the affordances and constraints offered through the various media through which Physical Education is taught.

2 THEORETICAL FRAMEWORK: EXPERIENCES AND METAPHORS

In his theory of experience, Dewey (1938) acknowledges the role of continuity of experiences, which involves the drawing together or interaction of previous experiences in ways that modify the quality of future experiences. Reflective practices offer a way for teachers and teacher educators to access and make sense of previous experiences such that they influence how present and future experiences are engaged with and understood. In this way, the principle of continuity of experience means that making sense of an experience requires not only reflecting retrospectively but also imagining future experiences and possible "ends-in-view" (WARD; QUENNERSTEDT, 2015). In our research, we intend to use the examination of our previous experiences in teaching or enacting pedagogies in a blended mode course that took place in 2019 to inform and help us make sense of how we might engage with similar experiences in the future. For example, should the analysis of our experiences lead to using the same or similar approaches in the future or should they change? If they should change, what changes should be made and should those changes be slight or radical?

Lakoff and Johnson (1980) suggest that experiences are often made sense of through metaphors. While metaphors are typically thought of as tools of language, they also help frame our thoughts and actions. According to Lakoff and Johnson (1980), metaphors have an experiential basis and can be used to identify relationships between experiences, their description, as well as past, present, and future actions. Metaphors also reflect important cultural interpretations and understandings that are more or less understood by most people (BERENDT, 2008). Teachers and teacher educators have used metaphors to help describe and create coherence between their thoughts and decisions, and their enactment in practice (BULLOUGH Jr., 1991). For example, in Hordvik *et al.* (2021), we used the metaphor of orchestration to help illustrate the facilitation practices of Mats, who was supporting the ongoing professional learning of colleagues. While metaphors can help to develop coherence in practice, they can also reveal contradictions, uncertainties, and inconsistencies. Metaphors may then serve as a helpful device in making sense of the complexities of teaching in a blended mode and articulating coherent personal pedagogies of teacher education that are grounded in experience.

We use the metaphor of miscibility to examine Tim's practice in a blended mode course. Miscibility refers to the properties of liquids that are able to mix together in order to form a homogeneous mixture or solution (HARDIGER, 2015). For example, when water is mixed with ethanol, both mix to form one homogeneous solution. In contrast, liquids that do not readily mix together are immiscible, such as when oil or water-based liquids are combined. Scerri[1] used the metaphor of miscibility to illustrate the "marriage" of chemistry and philosophy, asking whether the two fields of study were miscible or able to be integrated in any way. We believe that the metaphor of miscibility may be helpful to think about the ways blended approaches to teacher education can be thought about and enacted. For example, how do the in-person and online components of blended courses function in ways that the two formats "mix"? That is, we are considering how Tim's teaching and the students' experiences "mix" in ways the lead to coherence in understanding and learning about teaching. Ontologically,

1 SERRI, 1997 cited by ERDURAN, 2013.

Lakoff and Johnson (1980) would describe miscibility as an entity metaphor because if offers a platform to support how experience is understood, elaborated on, or made sense of through using concepts such as referring, comparing, locating, expressing, and visualizing. We argue that miscibility can be adapted to assist in understanding all kinds of professional practice, including the complex processes of enacting blended approaches to teacher education. Thus, our guiding question is: How does the metaphor of miscibility offer an understanding and elaboration of the enactment of one blended teacher education course?

3 METHODOLOGY & METHODS

We used a collaborative S-STEP design for this research, meaning it: (a) was self-initiated and self-focused, (b) was improvement-aimed, (c) was interactive on different levels and intensities throughout the research process, (d) generated multiple forms of qualitative data, and (e) positioned validity as a process based in trustworthiness (LABOSKEY, 2004; VANASSCHE; KELCHTERMANS, 2015). Moreover, the research reflected an inquiry-oriented stance concerning our identities and practices as teacher educators; we were driven by a desire to learn, to question, to critique, to understand our selves-in-practice, and; our stance and desire leads us to share the work with members of the PETE community so that the work can be critiqued and potential value be found by ourselves and other teacher educators (OVENS; FLETCHER, 2014). As well as being grounded in these features of S-STEP, we also connect this research with other work we have engaged in (e.g. FLETCHER; BULLOCK, 2015; HORDVIK *et al.,* 2021), thus forming the chains of inquiry others have called for in S-STEP (BULLOCK; PEERCY, 2018; ZEICHNER, 2007).

3.1 CONTEXT

Tim teaches in an undergraduate PETE program where many pre-service teachers are enrolled in one of two degrees that provide pathways to becoming a Physical Education teacher. Mats teaches in an undergraduate PETE program where pre-service teachers are enrolled in one degree that will qualify them to become a Physical Education teacher. Tim's teaching is the focus of the inquiry, as Mats took on the role of critical friend. The specific course that provides the focus for this inquiry is called Reflective Practice in Physical Education. In the year this research was conducted there were 34 pre-service teachers enrolled. Key learning objectives in the course include introducing pre-service teachers to the processes of reflecting in- and on-professional practice (SCHÖN, 1983), examining reasons for wanting to become Physical Education teachers (and certain types of teachers), using reflection to view teaching and learning situations from the perspective of both teacher and learner, and developing habits of reflective practice. It is important to note here that while the context for the course was Physical Education teaching and experiences, the course was not taught in a gym or on playing fields; that is, pre-service teachers were not learning "in movement" necessarily.

Prior to this research, Tim had taught this course several times in a traditional in-person format, typically consisting of two 1.5 hour classes per week in a teaching

term (i.e. a total of 3 hours/week for 12 weeks). In previous iterations he found himself wanting to provide pre-service teachers with more opportunities to engage in their own personal writing and thinking as a way to engage in reflective processes, and to begin developing skills and habits as reflective practitioners. For this reason, he felt that a blended approach may allow pre-service teachers to engage with some of the course content in a more traditional format (i.e. one 1.5 hour in-person class per week) while the other 1.5 hours of weekly course content could be engaged with online. In the blended format, course content in the in-person mode was typically introduced through thematic readings and lecture material with an aim to stimulate small and large group discussion. The online component involved pre-service teachers generating and submitting individual reflections either on the weekly topic or about a personal experience they wished to explore further (e.g. unpacking a previous experience as a teacher or learner). This could involve 'free writing' or pre-service teachers could respond to a prompt that might facilitate their reflection (e.g. 'What do you want students to say about you and your teaching?').

As explained previously, when we designed this research in 2019, the selection to move to a blended format was pedagogical, based on Tim wanting to provide opportunities for pre-service teachers to engage in and with reflective learning tasks he felt were better offered in the online format than in an in-person setting. In taking on the role of critical friend, which is common in many examples of collaborative S-STEP (VANASSCHE; KELCHTERMANS, 2015), Mats positioned himself as a critical and supportive collaborator, someone who could offer insight, critique, challenge assumptions and decisions, suggest alternative perspectives, and facilitate new understanding about the focus of the inquiry (SCHUCK; RUSSELL, 2005). Although Tim's practice provided the main source of pedagogical inquiry in this collaborative S-STEP, Mats drew from his experiences as a Physical Education teacher educator to act as a critical friend who was invested in his ongoing professional learning as a teacher educator, and was particularly interested in studying, what was at the time of designing the research, innovative practice in PETE.

3.2 DATA SOURCES AND ANALYSIS

The Brock University Research Ethics Board provided clearance for the data gathering and analysis processes. Our data consisted of individual reflective journal entries (RJ) (9) and critical friend responses (9) entered throughout the 12-week teaching term. The reflective journal entries followed a 'free write' approach, where Tim wrote about his experiences concerning the blended mode course. Mats responded to these reflections either with his own separate entry or by using the comment function in the MS Word document to raise questions or to relate an issue to his own experience. Two Skype calls were audio recorded; one took place at the beginning of the term and one at the end. Course artifacts (e.g., lesson plans, course materials) were also gathered.

Analysis was guided by Braun, Clarke, Hayfield and Terry's (2014) six-step process for thematizing qualitative data. All data were compiled into one document. The first step involved familiarising ourselves with the data, which we did after all data had been collected. The second step led to the generation of initial verbatim,

descriptive and interpretive codes. The third and fourth steps involved generating, reviewing, and naming themes. Inductive analysis was carried out as we became more familiar with the data and began to make sense of it. Codes developed in the second step were allocated to preliminary themes that were generated in an iterative manner, in that they were in a regular state of revision and review. For example, in one data excerpt from the RJ, Tim wrote: "I have not been imaginative enough (or done enough planning) about what I can do in the online component". Initially this was coded as *confusion about the nature of blended learning.* Following analysis of ongoing data that mirrored similar thoughts and experiences, this code and several others were allocated to a preliminary theme that we labelled *a conservative approach to blended teaching*. Similar processes were applied with other codes that led to the generation of another theme: *a deficit view prompted pedagogical change.* As we looked across the preliminary themes, we noticed the ways that the in-person and online components of the course were positioned as separate rather than "blended". It was at this time that we began using the metaphor of miscibility as a way to represent the decision-making and enactment of the blended mode course, and for this reason, the realization may be considered as a "turning point", where new understandings and insights about teacher education practice were realized (BULLOCK; RITTER, 2011). This metaphor helped us make sense of our decisions and experiences, and (we felt), it held potential for others in the PETE community to make sense of blended approaches to teaching and learning. The sixth step (reporting) is presented in the following sections. Processes undertaken to establish trustworthiness included gathering several data sources from a data set gathered over a full teaching semester, detailing our audit trail, and seeking negative or disconfirming cases in the data.

4 RESULTS & DISCUSSION

Analysis showed that the blended PETE course was not conceptualized or enacted by Tim in a way that made it miscible (i.e. it was immiscible), in that the in-person and online components were viewed as separate entities. Interactions from our critical friendship enabled us both to see that a blended approach could be interpreted in different ways; these interpretations were often informed by our previous experiences with innovative approaches to teaching and learning and views toward future teaching practices. Tim's framing of the two learning formats as immiscible meant there were missed opportunities to offer educative experiences from one format to shape experiences in the other. In the following section we present data excerpts and several interpretations to demonstrate several key instances of Tim's decision-making and enactment of teacher education practices in the blended course, and how our critical friendship led to new insights about teaching and learning in online and in-person formats.

4.1 DECISIONS AND ENACTMENT OF A BLENDED PETE COURSE

As we report elsewhere (FLETCHER; HORDVIK, 2022), the first 3-4 weeks of teaching the course resulted in an amount of emotional tension for both of us, particularly for Tim, as we "lived" the enactment of what was, to us, a major

pedagogical change. For Mats, many of these emotional tensions arose due to the newness of our professional relationship as critical friends. But as some of the early heightened emotions began to settle, Tim was able to reflect more deeply on the thoughts, decisions, and enactment of his practice in the blended course. It was in the fifth week of the term that Tim wrote: "One of the challenges I am facing or have faced in making the course blended is that I am trying to pack a lot of material into the in-person component of the course, with the weekly responses being the only 'required' online component of the course" (RJ). This led to some further reflecting on how:

> I have not been imaginative enough (or done enough planning) about what I can do in the online component. For example, other than the weekly individual responses I have not offered any alternative tasks that might provide other ways of engaging with different parts of the course material.

In these comments, Tim explains how, up to that point in the course, he had been offering much of the content of the course – particularly concerning the nature and foci of reflective practice in Physical Education and some insights from other teachers and researchers gained from reflective practice – in the in-person format only. In a way, much of the "heavy lifting" required of both he and his students was limited to the in-person interactions. This led to some dissatisfaction about how he had planned and offered learning experiences in the online component of the course to the pre-service teachers. In response to this, Mats asked to learn more about how the blended approach was being enacted, questioning whether a flipped approach (where students access material prior to an in-person experience to enable discussion) (ØSTERLIE; KJELAAS, 2019) or a peer review activity had been considered for the online components. In Mats' previous engagement with and enactment of blended approaches, the flipped approach was almost synonymous with blended learning. This led Tim to make the following reflection. Although it is long, we feel it is worth providing here in full because it captures both the reasons for and outcomes of the decision-making and enactment of Tim's approach to the blended course:

> What I am wondering now is if I am preferencing the face-to-face component because it is how I have usually done things (i.e., it's familiar, 'safe', I have the work prepared and planned) or if because there are strong reasons to make this preference? I can see arguments to support both perspectives. In relation to the second, I can talk about the opportunities for interpersonal interactions between me and students and amongst students (i.e., student-student) where you can talk about things in different ways and where language and body language provide very different windows to communication than in written form, as is the case with the reflective prompts. However, I am also seeing a different level of engagement with the personal reflections that I have not seen with students in the past. They are writing about things which provide much stronger evidence of understanding and insight about professional practice than I have ever gotten from my students previously in this course, simply because I cannot go around to each small group in conversation and access and understand their thinking. This is leading me to question the foundations upon which my bias is based but also leading me to see that my bias has had direct consequences in what and how I plan: my lack of imagination in the online component is in a way directly reflective of my bias against that mode of learning; hence, I have spent way more time and effort in planning and preparing for the face-to-face experiences. A more balanced approach to this, and a re-imagination of the possibilities of the online component are therefore required in my next iteration of the course...

Thus, even though we felt we had made a case for using a blended approach that was based on sound pedagogical reasoning, such reasoning still came with limitations and constraints on the enactment of the course.

In a recorded conversation that immediately followed our exchange of reflective journal entries and responses, Mats provided a lot of helpful and innovative examples of enacting more of a flipped approach in one of his courses, where pre-service teachers accessed materials online prior to attending an in-person component:

> […] We're taking all teacher-led teaching out of the teaching, so we're not having anything on PowerPoint or presenting any content. The students are working together in understanding the content and then presenting the content to each other [in a face-to-face setting]. So we're turning it all around in a way. And instead of presenting the content [in a traditional lecture format], after the students have been working with the content, we try to challenge them on that content.

Interestingly, amongst the reasons Mats and a teaching partner gave for this change was that it, "was more about challenging myself and challenging the course and challenging the way we think about teaching".

The metaphor of miscibility is helpful to visualize and make sense of how we both conceptualized what a blended course could look like and entail, and also to how, as a result of our critical friendship interactions, changes could be made to the course in the future. For instance, Tim's approach to planning and teaching the blended course was more like an immiscible solution, where two liquids are combined but do not mix to form one solution (like oils in a salad dressing). In this way, the course was blended in name only, with the in-person and online components being treated as separate entities, with few opportunities for one to intentionally inform how the other was engaged with. We can also interpret Tim's position in relation to issues of control in both environments. Specifically, in the in-person setting he was able to exercise more control than he was in the online environment and by minimizing what was planned, there were fewer opportunities for situations to move out of his control. In our analysis, we interpreted this as a conservative approach to teaching in a blended format, which may contrast with a more progressive approach, whereby both elements of the course could be integrated more creatively to enable their strengths to play off each other. In one of our recorded conversations, Tim reflected further on the basis for what we felt was a restricted version of blended teaching and learning, linking his beliefs to the outcomes of another collaborative S-STEP inquiry on online teaching:

> One of my reasons for wanting to make it blended, it wasn't necessarily the strengths of the online component, it was the weaknesses in the face-to-face component. As you said, rather than seeing this as the ways that each approach can enhance the other. I think I might be a little bit scarred from when I did the other study [on asynchonrous online teaching] with X, that was purely online and we were quite critical of what was happening there. The spaces for relationship building and so on. So yes, I've come to a much more appreciative view of what is possible but again, my default is: get all the good stuff in the face-to-face and then leave the rest for the online. But I'm really starting to question that decision and that assumption because I think I could enhance the online part even further.

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As shown in the data excerpt, Tim put his position down to his previous experiences and beliefs about the affordances and constraints of both approaches (FLETCHER, BULLOCK, 2015). This led to quite cynical and deficit views of what was possible in asynchronous modes of online learning that filtered into and informed his views of a blended approach and resulted in the two components of the course being treated as immiscible. In contrast, Mats' approach to enacting a blended course represented the in-person and online components as being miscible, where the two could mix together — be more fully integrated — to form a coherent whole. Like Tim, Mats' view was shaped by his previous experiences of enacting in-person and online teaching, however, his experiences were far more positive, particularly when he considered what and how the students in the course were learning.

5 DISCUSSION

The purposes of this research were to (a) examine our decision-making and experiences of enacting a "blended" approach in one course and (b) to use the insights generated from our experiences to inform future considerations for blended pedagogies. The metaphor of miscibility helps to illustrate ways in which Tim's approach to teaching in a blended format in this course was enacted in name only; in reality, what was enacted was not blended but rather two formats sitting side-by-side (or immiscible, when two solutions do not mix). This was due to what we interpreted as a conservative attempt to enact a blended approach by Tim, which was facilitated by his deficit view of aspects of the in-person format as an impetus for enacting a blended approach rather than a robust and thorough consideration of the affordances of the online platform. As a result, the two were not used in ways that necessarily complemented each other but each was used separately for its own purposes.

Dewey (1938) might interpret these positions through his theory of experience, particularly in terms of the continuity of experience, where previous experiences inform those in the present and future. More specifically, when experiences are considered to be educative, they are more likely to lead an individual to seek more similar or extending experiences due to their positive nature (in terms of learning) and potential for personal growth. In contrast, miseducative experiences are those that are perceived to inhibit further growth; this may be because previous experiences were harmful or understood to be limiting, boring, or ineffective. Mats' previous experiences with enacting blended approaches may in this way be understood as more educative than those of Tim, who drew on experiences from a previous collaborative S-STEP where aysnchronous online course components had been perceived as limiting.

At the same time, S-STEP has allowed an analysis of these miseducative experiences to begin to see possible educative outcomes. In viewing experiences along a continuum, we can see ways that our experiences of making decisions, enacting, and interacting in relation to the blended course have implications for future experiences, leading toward "ends-in-view" (WARD; QUENNERSTEDT, 2015). For example, as the world returns to some sort of normalcy beyond the pandemic, teacher educators may have more flexibility and choice in how and what they teach in PETE, and in this way it will be important to consider ways to use the strengths of both in-

person and online formats so that students experience the ways one benefits the other. As O'Brien *et al.* (2020) suggest, the onset of covid-19 may have forced some teacher educators in Physical Education who were reluctant to embrace online and digital technologies to do so, particularly in how courses are formatted and offered to pre-service teachers.

For us, this results in a tension for teacher educators surrounding the use of online and digital technologies. For instance, we are encouraged by the optimism shared by O'Brien *et al.* (2020) in relation to the possibilities of teaching in some online formats. It was with a similar optimism that led us to engage in this research, as we saw some potential in using a blended approach. Perhaps Tim did not see the full potential of the online component of a blended course, however, which led to a limited and conservative version of blended teaching and learning in PETE in his case. This stands in contrast to Mats, whose previous experiences led to a more fully fleshed out and transformative interpretation of blended pedagogy. The point of tension arises between several of the possibilities outlined, such as through flipping the classroom and de-centreing the teacher educator's role, and the urging of some caution and criticality in technology adoption (SELWYN, 2011). While neither of us would describe ourselves as reluctant adopters of innovations (whether technological or not), we would identify as teacher educators who are committed to making sound and informed pedagogical decisions and reflecting deeply upon those. Our experiences perhaps serve as an exemplar of the complex decisions teacher educators face and how collaborative S-STEP can lead to new and deep insights about these complexities, particularly in terms of moving from seeing potentially miseducative experiences as educative.

The use of metaphor helped us to see and make sense of our experiences. In this case, the metaphor of miscibility has helped Tim see how his approach was based more on the constraints of one approach compared to the affordances of another. In another paper (HORDVIK *et al.*, 2021) we used the metaphor of orchestration to help make sense of Mats' facilitation practices; while the two metaphors offer different interpretations and visualizations, we argue in favour of the strength and utility of metaphors in helping teacher educators to make sense of the complexity of their practices and work.

From interacting and reflecting on our experiences of enacting a blended approach, we do not feel we have solutions for the future but we do come away with a more nuanced perspective to support how we make decisions and enact blended approaches to teaching in PETE beyond the pandemic. While he still intends to use a blended approach in the course, Tim is committed to strive for miscibility in how he enacts the blended course. To continue with the miscibility metaphor, it will be the relative concentrations of the two course components within the 'mixture' that will require ongoing adjustment and fine-tuning to enable a more miscible blended course.

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Resumo: Neste artigo, discutimos descobertas de um autoestudo colaborativo que realizamos sobre a adoção de uma abordagem combinada (ou seja, composta por componentes online e presenciais) para um curso de formação de professores(as) de Educação Física. Os dados consistiram em diários reflexivos e conversas gravadas. Examinamos assunções sobre estrutura, conteúdo e pedagogias de abordagens "combinadas" usando a metáfora da miscibilidade, na qual os líquidos se misturam para formar uma solução homogênea. O curso de formação de professores(as) não foi conceituado ou fomentado de uma forma que o tornasse miscível (ou seja, era imiscível), na medida em que os componentes presencial e online eram vistos como modalidades separadas. Isso significava que havia oportunidades perdidas de oferecer experiências formativas em uma modalidade para estruturar as experiências na outra. Após a pandemia, será importante considerar os pontos fortes dos formatos presencial e online para que alunos(as) experimentem as maneiras como um pode beneficiar o outro.

Palavras-chave: Educação Física e treinamento. Metáfora. Capacitação profissional. Educação à distância. Auto estudo.

Resumen: En este artículo, discutimos los hallazgos de un self-study colaborativo que hemos realizado sobre la adopción de enfoque combinado (es decir, compuesto por componentes online y presenciales) para un curso de formación de profesores/as de Educación Física. Los datos consistieron en diarios reflexivos y conversaciones grabadas. Examinamos asunciones sobre estructura, contenido y pedagogías de enfoques "combinados" utilizando la metáfora de la miscibilidad, donde los líquidos se mezclan para formar una solución homogénea. El curso de formación de profesores/as no fue conceptualizado ni fomentado de manera a volverlo miscible (es decir, era inmiscible), ya que los componentes presencial y online eran vistos como modalidades separadas. Esto significó que se perdieron oportunidades de ofrecer experiencias formativas en una modalidad para estructurar experiencias en la otra. Después de la pandemia, será importante considerar los puntos fuertes de los formatos presencial y online para que los alumnos/as puedan experimentar formas de que uno pueda beneficiar al otro.

Palabras clave: Educación Física y entrenamiento. Metáfora. Capacitación profesional. Educación a distancia. Auto estudo.

CONFLICT OF INTERESTS

This work involves no conflict of interest.

AUTHORS' CONTRIBUTIONS

Tim Fletcher: All aspects of conceptualization, data collection/analysis, writing.

Mats Melvold Hordvik: All aspects of conceptualization, data collection/analysis, writing.

RESEARCH ETHICS

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