ABSTRACT
Feiman-Nemser (2008) noted the importance of teacher education on the development of teachers, and “how teachers acquire, generate and learn to use knowledge in teaching” (p. 698). The purpose of this investigation was to examine aspects of adventure education for which pre-service teachers’ (PTs) planned, and subsequently taught during a teaching practice (TP) placement. We also sought to gain an understanding of the challenges these PTs faced when teaching this content as part of a physical education curriculum. Data were collected through schemes of work (SoW) and lesson plans (LPs), researcher field notes, a focus group interview, and post lesson discussion. Analysis of data sources revealed little alignment between what PTs planned and what they taught. Attempts were made to incorporate debriefing into lessons but no adventure principles were integrated (Full Value Contract (FVC), Experiential Learning Cycle (ELC) or Challenge with/by Choice (CbC). Challenges that impacted the delivery of lessons included lack of resources and facilities, and perceived student resistance. Findings suggested PTs misunderstood the adventure principles and struggled with adapting and applying knowledge during teaching practice. PTs often focussed on ‘filling time’ as opposed to teaching toward student learning. Further study is needed to examine how teacher education is delivered and what adventure experiences PTs enter teacher education with, to understand why and what PTs plan for and teach and what influences their decisions.

KEY WORDS
Pre-service teachers, teacher education, physical education, teacher planning, learning to teach

INTRODUCTION
Feiman-Nemser (2001) suggested teachers have two jobs, they have to learn and they have to learn to teach. There was a time when content knowledge (CK) was the pre-determining factor in gaining teacher recognition (Shulman, 1986) yet it cannot be assumed that merely having knowledge infers ability to teach. Shulman (1986) argued the importance of learning content and pedagogy simultaneously which he coined, pedagogical content knowledge (PCK). Through PCK PTs gain CK and how to teach this specific content. Siedentop (2002) argued that it is not possible to have PCK without CK and
shared his view that much focus today is placed on pedagogy rather than content. Oslin, Collier and Mitchell (2001) discussed how their Physical Education Teacher Education (PETE) programme delivered content through different curriculum models facilitating PTs to “live the curriculum” during their teacher education. They reported that PTs “demonstrated greater understanding of the concepts” (p. 51) of the models and taught “with much greater comfort during their field experiences...” (p. 51) when PCK was integrated with learning of curricular models.

Research has consistently recognised the significance of the TP experience for PTs as they learn to become teachers (Graber, 1995, Rovengo, 2003,). Dodds (1989) argued that TP is the “closest juncture between formal teacher training in universities and on the job training in schools” (p. 8). Grossman and Richert (1988) suggested difficulty in distinguishing between what PTs learn in the field and during their teacher education. If we are to understand what impacts PTs as they learn to teach and inform teacher education practices it is important to begin to understand what PTs learn about teaching, what they are teaching, why they are teaching the content they are teaching, and how they are teaching this content in an Irish context.

Research has demonstrated that PTs are faced with many challenges during their TP experience (Behets, 1990, Capel, 1997, Fuller, 1969) including management concerns (Fuller, 1969, Tsangaridou, 2007), student resistance (Behets, 1990, Rovengo, 1994) and anxiety (Behets, 1990, Capel, 1997). Dodds (1989) argued that all personnel within the teaching environment influence teaching and that it is essential that teacher education study what “happens to trainees in the field...” (p. 8). It is necessary for teacher educators to recognise challenges faced by pre-service teachers and make sense of the impact of these on PTs as they are learning to teach. For knowledge and practice to support and influence each other Cochran-Smith (2005) prompted us that research is needed on “what teacher candidates actually learn, how they use what they learn in schools and classrooms...” (p. 302).

Adventure Education
Adventure education is framed by the experiential learning cycle (Kolb, 1984) that integrates experience with guided reflection and analysis (Brown, 2006). The adventure education model (Henton, 1996) when integrated within a school setting incorporates the models guiding principles; the full value contract (FVC) and challenge by/with choice (CbC). A FVC is a contract developed by participants to guide behaviour, effort and commitment through the setting of goals and gaining group consensus to work towards achieving those goals. The CbC principle requires the teacher to design activities with more and less challenging options to allow choice of participation levels by all students, ‘sitting out’ not being an option.
Research has highlighted the benefits of adventure education programmes for students (Carlson & McKenna, 2000, Dyson, 1996, McKenzie, 2000). No research was found on how PTs implement and engage with adventure education as a curriculum model and in turn how these PTs work with their understandings of the model in the school context.

Irish Curriculum
The secondary school system in Ireland is divided into junior cycle (1st year – 3rd year) and senior cycle (5th year – 6th year) with an optional transition year between (4th year). A Junior Cycle Physical Education (JCPE) curriculum syllabus was introduced in 2003 by the National Council for Curriculum and Assessment (NCCA); while a senior cycle and leaving certificate curricula are currently in draft format. The JCPE areas of study include adventure activities as one of the 7 content areas. The aim of the adventure strand of the JCPE syllabus is to challenge and develop students’ personal and social skills through participation in adventure activities conducted in a safe and enjoyable environment (JCPE, 2003). The syllabus provides students with opportunities to develop decision making skills, leadership qualities, awareness and consideration of the environment, personal and group safety awareness through enjoyable participation and reflection (JCPE, 2003).

PURPOSE OF THE STUDY
This study investigated PTs experiences planning for and teaching adventure education during their first post-primary TP experience. The study aimed to gain insight into what they planned to teach and what they actually taught as adventure; as well as gain insight on challenges they faced during TP and how these impacted their teaching.

METHOD
Setting and participants
Participants were PTs studying for a B.Sc in physical education. Eleven pre-service teachers, who previously experienced the adventure education module during their teacher education volunteered for the study. All participants were in their 2nd year and participating in their first post-primary TP experience. This experience consisted of a six week block placement within the junior cycle programme in the school setting with number of adventure lessons taught varying from one to four. The researcher was not involved in tutoring or grading these PTs, all who have been given pseudonyms, Elaine and Claire. During first year of the teacher education programme the PTs ‘lived the adventure curriculum’ they would teach in schools. PTs experienced adventure education through a themes-based approach (getting to know you, co-operation, communication, building trust, problem solving and group challenges) with experiential activities introduced through the
integration and development of adventure principles; FVC, CbC, ELC and debriefing/processing the experience (Henton, 1996). Once trust and co-operation were developed PTs ‘lived’ the outdoor education component through orienteering and camp craft on campus and during an outdoor adventure centre experience. PTs learned adventure education through a PCK approach; learning as students and learning as teachers; experiencing adventure education as participants, peer teachers in the university setting and as adventure education teachers in a primary school setting. Teacher education was the PTs first experience of adventure education as other than a 1-day recreational experience at an adventure centre they had not been exposed to this strand in their primary or post primary school curriculum.

**Data collection**

The researcher observed two of the eleven volunteer PTs actually teaching their adventure education lessons during TP. The other nine participants participated in all data collection components other than teaching observations. This paper reports data from the two PTs that participated in all data collection components (n=2). The researcher was keen on following a larger cohort of students however due to timetable and administrative constraints, it was not possible.

Four data collection methods were employed during this research; collection of lesson plans (LPs) and schemes of work (SoW), researcher field notes from lesson observations, a post lesson discussion and a focus group interview. The key data set was the focus group interview.

*Lesson Plans and Schemes of Work*

PTs submitted LPs prior to each lesson and adventure SoW were collected after TP was completed. Analysis of these teaching plans was to gain knowledge on what PTs planned to teach. These were then compared to researcher observation data and informed questioning in focus group discussions.

*Researcher Observation Field Notes*

Elaine and Claire taught in the same secondary school. The researcher observed both PTs teaching two of their four adventure lessons, keeping field notes on all aspects of the lessons using a guided note format. Guided notes focused on which aspects of adventure education were taught, methods used to deliver lessons and consistency to what was planned. Data from field notes guided focus group questions.

*Post Lesson Discussion*
Due to timetable constraints only one post lesson discussion was held which followed Elaine’s second of four lessons to gain insight into her perspectives of the lesson e.g. planning, challenges, lesson progression, and implications for future practice.

Focus Group Interview
The researcher met with PTs at the close of TP experience for a semi-structured focus group interview. Elaine and Claire formed one focus group where they were prompted to discuss challenges and experiences they had during teaching of adventure lessons. Interviews sought to examine the impact of TP on their understandings of and commitment to teaching adventure, knowledge on the role of planning for teaching, decisions on content delivered, challenges encountered during TP, methods used to teach adventure and discrepancies between what was planned and what was taught.

Data Analysis
Understanding the data required repeated and continuous reading of each data source. Through inductive analysis, patterns and themes were identified. Atlas software served to organise data into themes and codes. Triangulation of LPs and SoW, researcher field notes, post-lesson discussion and focus group interview were used as a means of understanding and aligning the data.

FINDINGS
This paper reports the main theme that emerged from each research question.

What PTs planned for when teaching adventure
Influences on planning emerged as the main planning theme for these PTs. PTs chose to teach adventure as a result of discussions with their co-operating teachers (CTs) who suggested it as a good option for 3rd year classes and because many adventure resources were available in the school. During the focus group interview PTs discussed how available resources influenced their decisions on what content they planned as did the JCPE syllabus and activities they experienced in their own coursework. Most activities PTs chose were those they enjoyed most themselves yet they noted not using resources provided through their own coursework although researcher field notes showed much of the content they delivered was similar to what they had experienced.

…you [Elaine] reminded me of the rucksack game, I wouldn’t have thought of that at all…but then it worked really well it took up a good 20 minutes in class and the students enjoyed it and like you know….I’m just thinking now…another game could be
applied or even if we had a list of them…you know…we probably do in our first year folder but I mean you know…that's at home in the attic somewhere. (Claire)

Elaine and Claire commented on the influence of their achieving a TP grade as important in planning their SoW and LPs. Analysis of SoW revealed that their two PTs SoWs were almost identical with shared aims, objectives, equipment requirements, assessments and lesson content details. PTs spoke of using the same orienteering LP; although they noted the classes were quite different in terms of behaviour and size. Both emphasised that LPs are TP requirement and important for receiving a TP grade as opposed to facilitating teaching for student learning.

Elaine: …you know when you plan a lesson like…well, you plan a lesson and where you’re writing a lesson you kind of …you’re writing stuff and you’re probably thinking God that won’t happen, you just put it on paper.
Claire: You still put it down on paper, on file, you know you need to have it covered
Elaine: And that influences people on teaching practice…

What PTs taught as adventure
Teaching strategies emerged as the most prominent theme. Researcher notes revealed that Elaine and Claire chose different methods of delivering content; Claire chose to use demonstration during task introduction and Elaine did not. Claire espoused discovery learning yet her teaching practice allowed little opportunity for discovery as researcher filed notes showed Claire demonstrating solutions to problems posed to her students. During the focus group interview Claire discussed the importance of her always being in control, seemingly unaware of how this impacted student opportunities to discover.

I demonstrated because I kind of like to be structured and like you know…I like to know what they are doing. If I didn’t demonstrate it still would have been effective because it would have enabled them to discover their own method of getting across the river... So it still would have been effective and like …you know looking back I suppose at the different tasks I might have demonstrated them … ‘ok you’ve got two mats, you’ve got six people to get across’…and let them do it... I just didn’t in that case. (Claire)

Elaine also believed it was important to allow students to ‘discover’, problem solve, and learn for themselves, choosing to brief them on the problem to solve without giving them the answers through demonstration or procedures.
I suppose it makes them think a bit more. It makes them a bit more independent of you…and then you’re not always giving them the answer…and maybe like if they come up with different ways they have more satisfaction…and then they’re more willing to try the next activity by themselves

**Challenges faced by PTs when teaching adventure**

The most prominent theme evident that challenged these PTs was student participation and resistance, or how PTs thought things might be perceived by students.

**Student behaviour**

During the focus group interview PTs suggested a concern for ‘keeping students busy’ and not having enough planned to keep the class focused for the full lesson. They both spoke about ‘filling time’ regardless of whether it aligned with learning in adventure or with their own understandings of adventure.

Claire: … you’re like ‘oh my God I have to get them doing something’
Elaine: ‘Cause if you lose them at any stage…well like…the problem with a short class anyway…you can lose them at any stage
Claire: Yeah sure we had to play dodge ball at the end of one of the classes
Elaine: Yeah
Claire: ‘Cause they just wouldn’t do the games. That was actually at the end of the second cooperative games lesson. They wouldn’t play the games so I mean Jane [CT] was ok we can play dodge ball they need to work as a team
Elaine: Yeah, ‘cause she was like in fairness with this kind of class any kind of a game becomes a cooperation game because…
Claire: Yeah
Elaine: They don’t cooperate at anything, so anything will help develop…
Claire: Yeah it’s true, and then they start firing balls and everything, it was a disaster …but sure…it passed the time (Elaine and Claire)

Elaine talked about her concern with keeping all students active which she felt unable to do when ‘facilitating’ a lesson.

When I was doing ‘Human Knot’ with them and there were two different groups…one of the groups were nearly finished and the other group were still only getting started…I felt like this urge to go in and say ‘Do this, do this, quick catch up with them, come on, cause we have to move on to the next one’…but you probably shouldn’t and you should leave them off…but then you have the whole thing of
what to do with the other group then...do you just tell them to just do it again...that’s hard...that’s what’s so hard about being a facilitator. (Elaine)

Similarly, Claire indicated that student misbehaviour prevented her from being an effective facilitator.

I think like when for the adventure lessons I was a bit teachery in the sense that you know I did ...kind of...talk about getting stuff like that, like I could’ve had more of a facilitator role by stepping back a little bit more...am...but because of the class I needed to talk...cause if I didn’t they would have done nothing. (Claire)

PTs perceptions of student behaviour impacted their decisions on content they taught. They indicated, for example that student resistance prevented them from integrating a FVC. Claire suggested a FVC was only suitable for better behaved classes, and did not see it as a tool to aid behaviour management, goal setting, or teaching responsibility.

My class probably wouldn’t take it serious but if it was a good class they’d probably take it more serious then...and want to achieve it. (Claire)

Elaine believed the FVC was a ‘lovely idea’ but not realistic to use in a school setting.

They might think it’s a bit immature or something...so then they mightn’t do anything...so, if it was a more mature way they might take it more seriously. (Elaine)

Elaine also indicated that she did not enjoy, or see the point of creating a FVC when she experienced it during her own teacher education and thus chose not to use it during TP. Claire noted that while some of her students would benefit from the FVC other students who have a strong influence would sabotage it for everyone.

Even if one or two of my class would have...or a few of them would have enjoyed doing it and would have [been] ‘oh yeah let’s achieve that’ but then they wouldn’t of due to the opinions of the others. (Claire)

Claire and Elaine discussed experiencing many difficulties in supporting students’ learning through the debriefing process.

...I tried questioning and stuff but sure to be honest none of them had much interest in answering...I always had to spoon feed them like ‘What skills did you develop?
And why?’ and they’d be just like ‘cause we communicated with each other’, d’you know they were very simple answers and they weren’t deep reflections at all but I mean I made an attempt but it wasn’t very successful. (Claire)

I did think about the way that I…well as in the way that I was talking to them and how I was questioning them and I think I was better the second day…but, I wouldn’t do any deep reflection where I thought ‘Oh my God I’m totally going to change this in a whole new approach’… it was a case of just surviving. (Elaine)

During the interview PTs shared difficulties getting students to discuss what they learned and its significance. Claire resorted to framing questions so students wouldn’t have to think and just respond with a one word answer e.g. ‘communication’ or ‘co-operation’. While this type of response was not in line with the purpose of a debriefing or reflection, the ELC was the only adventure principle for which PTs could identify issues and concerns.

**DISCUSSION AND CONCLUSION**

Feiman-Nemser (1983) suggests that what is known about learning to teach does not ‘fit’ with teacher education practices citing that informal influences have more impact on teachers as they learn to teach. She argues for teacher educators to change what they do and how they think about learning to teach. Cochran-Smith (2005) and Feiman-Nemser (2008) highlight the need to understand what PTs learn during teacher education and how they use this knowledge when teaching. This study sought to understand how PTs use knowledge gained during teacher education by identifying what these PT’s planned for and in turn taught as adventure while highlighting challenges they faced when teaching during their first teaching practice experience.

There were many influences that impacted these PTs planning, one being availability of resources in their school. Findings suggested that PTs did not use resource materials provided through teacher education (Tannehill and Dillon, 2007) and that instead they chose only to use resources available through school. It is important to note however that Claire discussed not using resources gained through teacher education as these were in the ‘attic’. TP requirements and earning a ‘good’ grade was a major influence in how PTs created and presented LPs as opposed to designing lessons to guide teaching that would facilitate learning. It was also noted that what these PTs planned for was not necessarily what they taught, making it unclear what role planning played for them. Based on these findings, it would be reasonable to assume that the PTs did not focus on student learning. If PTs did not use LPs as a means of planning for learning can it also be assumed they did not plan for the lesson at all? This raises the question of how and what do PTs plan for when teaching?
With knowledge of what PTs experienced when learning to teach adventure, researcher observation suggested PTs used many of the activities experienced but did not incorporate most of the ‘key’ principles and elements of adventure education which they ‘lived’, such as FVC, CwC, and debriefing. This contradicts Oslin, Collier and Mitchell’s (2001) findings who argued that PTs taught with a better understanding when they have ‘lived the curriculum’.

Lack of a complete picture of what PTs intended to teach makes it difficult to make sense of what they actually taught as adventure education. Choice of teaching strategies impacted what was taught as adventure, and caused the researcher to question whether what was taught was, in fact adventure education, or merely adventure activities. PTs integrated strategies such as demonstration and competition as a means to maintain control yet were not consistent with the problem solving and experiential nature of adventure. On reflection, PTs recognized the misalignment of the strategies used and the impact these had on the adventure experience yet this contradiction was not a concern for them as long as the students were actively involved which supports the notion that PTs were more concerned with their own survival than student learning.

PTs were challenged by their perception of potential student resistance in their decision to not integrate a FVC into their scheme. However, it became evident that both PTs misunderstood the aim and role of a FVC as well as other adventure education principles. It is important for us to better understand PTs interpretation of adventure education philosophy and practice as we examine their rationale for inclusion and exclusion of these components.

Both Claire and Elaine struggled with the process of debriefing the experience with students. They did not seem to understand their role in guiding and helping students to achieve learning through debriefing/processing the activity. Instead they ‘blamed’ students for not doing “deep reflections” of the experience. As PTs omitted processing questions and strategies from LPs it is unclear what they intended to achieve through debriefing Claire chose to ask students to write words in response to questions during the debriefing although she never followed up on their responses. This made it difficult to understand what Claire hoped they would learn through this exercise, or the lesson yet she shared delight that students actually wrote something down suggesting an emphasis on student participation as opposed to learning. Elaine recognised that students were not learning through processing yet chose not to help them to improve or learn more; ‘making an attempt was enough’ and she should not be expected to ‘do it right’. This supports Rovengo’s (2000) findings where PTs resorted to a ‘curricular zone of comfort’ when challenged by student resistance, with the focus being keeping students active as opposed to learning.

Without more complete detail on PTs planning decisions we do not know why these PTs did what they did. It is unclear what these PTs wanted their students to learn, or if they wanted...
their students to learn, as these two PTs appeared to be focused on their own survival. Were these PTs unable to help their students learn or were they not motivated enough to guide students in their learning? Gaining an understanding of the PTs decisions and actions, the role planning had for them, what they plan for and what influences this planning, interpretations of what they are teaching, what they hope to achieve and how, what challenges they face and how they deal with them is crucial. This knowledge would help identify the relationship between the PTs decisions and actions; thus providing a valuable contribution to how and why PTs use what they learn in the classroom and in turn inform current teacher education practices.

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