



An exploration of pre-service technology teachers perceived preparedness to teach and promote well-being in Irish post-primary schools

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Abstract

Supporting mental and physical well-being during adolescence is critical for positive individual development and growth (Aston, 2018; Borland et al., 2022). Influenced by factors such as schooling, family dynamics, and social media (Žukauskienė, 2014), well-being has become increasingly relevant in the Irish post-primary curriculum following recent educational reforms. Designated as one of the core principles of lower secondary education (DES, 2015), well-being is guided by the National Council for Curriculum and Assessment (NCCA) *Wellbeing Guidelines* (NCCA, 2017, 2021), which offer strategies for implementing cohesive school programmes. Due to a keen interest in well-being and its close but not always apparent links to technology education, this mixed-methods study explored pre-service technology teachers’ preparedness to teach and promote well-being in Irish post-primary schools. Employing a mixed-methods approach, data were collected from final-year pre-service technology teachers via online surveys (Phase 1) and online semi-structured interviews (Phase 2). The findings indicate that while participants expressed interest in teaching well-being, many felt unprepared and lacked a deep understanding of the area, particularly within the curriculum. Challenges identified include curriculum overload, assessment pressures, and varying levels of teaching experience. Teacher well-being emerged as a significant issue, with high stress impacting classroom effectiveness. However, opportunities for promoting well-being were also noted, including extracurricular activities and the availability of targeted resources. This study highlights the complexity of integrating well-being into technology teaching and the need for systemic support across the whole school community. Recommendations emphasise the importance of resources, policy adjustments, and enhanced initial teacher education (ITE) to address these challenges, ensuring well-being is effectively promoted within Irish post-primary schools.

Keywords Technology teacher education · Well-being · Pre-service teachers · Mixed-methods · Post-primary education

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Introduction

The integration of well-being into education has gained prominence globally, with growing recognition of its role in supporting students' holistic development and lifelong success (OECD, 2019). This study focuses on the perceived preparedness of pre-service technology teachers (PSTTs) in Ireland to teach and promote well-being, particularly within the post-primary educational context. In response to educational reforms such as the Junior Cycle Framework and the National Council for Curriculum and Assessment (NCCA) Wellbeing Guidelines and Policy Statements (DES, 2015; GoI, 2017; NCCA, 2017, 2021), Irish schools are mandated to integrate well-being into the curriculum, with a minimum of 400 h of well-being-related activities in Junior Cycle – lower second level education (that is, students aged of 12–15 years approximately). These initiatives aim to foster students' emotional, mental, and physical health, recognising well-being as a cornerstone of effective education (DES, 2015; Nohilly & Tynan, 2022). Furthermore, the Junior Cycle Wellbeing programme (NCCA) introduced in 2017 emphasises a whole-school approach to well-being, which requires all teachers, regardless of their specific subject specialisations, to contribute to the implementation of the well-being programme (O'Brien et al., 2024). However, prior to the publication of the Céim Standards for Initial teacher Education in 2020, well-being was not explicitly identified as a core focus within initial teacher education (ITE) programmes. The Céim document marks a significant shift by embedding well-being within the core elements of all ITE programmes. It specifies that programmes must include “Wellbeing (personal and community)” as part of Global Citizenship Education and notes the integration of wellbeing as rooted in “the principle of care for others” (Teaching Council, 2020a, b, p. 14). This represents the first time that well-being is given formal recognition as a key component in the preparation of teachers in Ireland. While advocates and proponents of well-being may have incorporated relevant content and experiences through the foundation disciplines such as psychology, sociology, or philosophy of education, there was no legislative or regulatory requirement for ITE providers to do so until the publication of these standards.

Despite the policy emphasis, questions remain regarding the practical readiness of teachers, especially within specialised areas like technology education, to deliver well-being programmes. Research indicates that teacher well-being is directly linked to the effectiveness of their teaching and student outcomes (Corcoran & O'Flaherty, 2022). However, challenges such as curriculum overload, assessment pressures, and limited teacher training on well-being present significant barriers to implementation (Farrell & Mahon, 2022). Set against this context, this paper explores final-year PSTTs understanding and perceived preparedness to teach and promote well-being. The study highlights the critical need for systemic support, targeted professional development, and the alignment of well-being policies with teacher preparation programmes to bridge existing gaps. By examining the intersection of policy, and teacher readiness this study contributes to the discourse on integrating well-being into specialised curricula and the preparation of pre-service teachers to deliver well-being content once they become embedded within the school system. It provides actionable recommendations to enhance Initial Teacher Education (ITE) programmes, promote teacher well-being, and ultimately support the broader educational goal of fostering flourishing school communities. The article is set out as follows. Firstly, ITE and ITTE are briefly introduced, followed by a discussion of well-being. The methodology framing the study is described and findings are presented. Finally, the authors offer some considerations and implications for practice.

Background

Initial Teacher Education (ITE) in Ireland has undergone significant evolution, reflecting broader educational and societal transformations. These changes were propelled by policy developments such as the White Paper on Education (DES, 1995) and subsequent legislative acts that established frameworks for teacher education. Today, the *Céim Standards* (Teaching Council, 2020a) emphasise well-being as an integral component of teacher preparation, highlighting its role in fostering supportive learning environments and professional growth. This section examines the historical trajectory and contemporary landscape of ITE in Ireland, highlighting key reforms and their implications for teacher readiness and holistic education.

Initial teacher education (ITE) in Ireland

The origins of teacher education in Ireland can be traced back to the early nineteenth century and remained unchanged until the 1960's when major reform and a human capital approach emerged within education policy (Coolahan, 1981; O'Doherty, 2014; O'Sullivan, 2005). The period between 1965 and 1975 was vital in the restructuring and development of ITE, with professional programmes becoming more modernised and emphasis placed on research within the sector (O'Doherty, 2014). The 1990's reflected an intensification of legislation related to Irish schooling and the increasing role of the State (O'Doherty, 2014). The *White Paper on Education, Charting our Education Future* (DES, 1995) directly influenced policy development and curricular reform in all stages of the education system. Importantly, the White Paper addressed the professionalisation of teaching with suggestions for improving the attractiveness of the teaching profession, development of a practical framework for the induction of newly qualified primary and post-primary teachers, and in-career development opportunities throughout a teaching career (DES, 1995). In addition, it was responsible for the creation of legislation directly linked to education, i.e. *Irish Universities Act* (GoI, 1997), *Education Act* (GoI, 1998), *Equal Status Act* (GoI, 2000) and *Teaching Council Act* (GoI, 2001) (O'Doherty, 2014, p.37). The introduction of these Acts formed the "legislative frameworks", which guided change within the education sector (Coolahan, 2003, p.2).

Notably, ITE has experienced considerable change in more recent years, mainly stemming from ongoing policy and legislation developments, the development of the Teaching Council, poor Programme for International Student Assessment (PISA) literacy and numeracy results, and the call for a review of the structure of ITE. A key development has been the establishment of the Teaching Council in 2006 whose remit is to ensure quality standards in teacher education. It is a key stakeholder in the professional accreditation of ITE programmes and the continuing professional development of teachers (Teaching Baunsmith & Barry, 2011; Clarke & Killeavy, 2012; Council, 2020a, b). From 2011 to 2021 the Council has been central in the review, reform and accreditation of ITE programmes in the Higher Education (HE) sector (Teaching Council, 2020a). In 2012 a major review of teacher education was undertaken resulting in the Sahlberg Report (Sahlberg et al., 2012). Two reasons for this review were, firstly, the PISA results in 2010 where Ireland scored poorly in literacy and numeracy rankings resulting in the identified need for the development of quality teachers equipped to effectively teach and promote literacy and numeracy within the school community (Conway, 2013; Hyland, 2018; Smyth & Banks, 2012).

Secondly, Ireland's economic recession during this period, whereby reform was viewed to develop this neglected area as well as a cost-saving measure within HE (Conway, 2013; Hyland, 2012). Fundamentally, recommendations in the Sahlberg Report have had a significant impact on the development of ITE in Ireland.

Finally, the most recent important policy development is the publication of *Céim: Standards for Initial Teacher Education* (Teaching Council, 2020a) which outlines the requirements that ITE programmes must achieve for Teaching Council accreditation. It specifies both programme standards regarding design, resourcing, and school placement; and graduate teacher standards related to skills, knowledge, understanding, and professional values. Interestingly, the programme standards are more significant within the context of the ITE accreditation process compared to the graduate teacher standards which are not measured in the process but merely to be used as a guide to support programme design (Treacy, 2022). The *Céim Standards* place a significant emphasis on well-being, recognising it as a core component of teacher preparation and professional practice. The document highlights well-being within the context of global citizenship education, advocating for the development of personal and community well-being among educators and students. It underscores the creation of supportive learning environments, both physical and digital, that cater to the holistic needs of all learners. Additionally, the standards encourage reflective practice and professional growth, which contribute to the personal well-being of teachers as lifelong learners and professionals, emphasising care and respect in education (Teaching Council, 2020a).

Initial technology teacher education (ITTE)

The importance of developing technological capability in terms of our evolving society and economy is deemed “necessary and relevant for all aspects of living and working” (NCCA, 2006, p.2). The practical nature of technology education classrooms allows for the development of technological capability through “the interaction of the mind and hand” (Kimbell & Stables, 2007, p.75). In Irish post-primary schools, technology education is provided at both higher and ordinary levels in the Junior and Senior Cycle. For Junior Cycle technology subjects, 200 h of contact time is allocated over the three-year cycle, with 180 h of contact time allocated at Senior Cycle over the two-year cycle (NCCA, 2006). These subjects are not compulsory subjects, which can lead to fluctuating numbers sitting the subjects at both Junior and Senior Cycle.

Whilst technology subjects in the current Irish education system were developed from the vocational schooling system in the 1930's, the roots of these subjects have played their part within “the Irish curriculum since 1885 as manual instruction and educational handcraft” (Carty & Phelan, 2006, p.7). ITTE programmes emerged due to the need for qualified teachers to teach technology-based subjects in Irish vocational schools (Leahy & Phelan, 2014), as well as the introduction of the technology-based subjects in the Leaving Certificate state examinations in 1969 (Lane et al., 2022). Lane et al. (2014) highlight the necessity for ITTE programmes to provide graduates with “a broad learning experience where they develop an in-depth understanding and appreciation of the principles of their subject discipline and pedagogy, refine and develop cognitive and psychomotor skills, while integrating this with the study of educational philosophy” (p.24). Problem-based learning (PBL) had been a critical pedagogical approach used by teachers of technology-based subjects to aid with effective teaching and learning (Lane et al., 2022). However, design, student-centred learning, and the promotion of creativity within the subjects are

now becoming the predominant strategies for effective learning in the technology classroom. This design-centred approach is thought to be crucial for the growth and stimulation of young people and their imagination (Lane et al., 2022; Leahy & Phelan, 2014). This shift, along with the ongoing development of ITE in Ireland, has given rise to the involvement of ITTE to suit the requirements of the technology subjects and the broader ITE landscape.

Well-being

The World Health Organisation (WHO), highlighted well-being as one of the many essential facets which contribute to an individual's health (Keyes & Shapiro, 2004). Whilst well-being is often linked to health, happiness and quality of life (O'Brien, 2008; Smyth, 2015), a clear definition of the concept remains elusive. One of the key developments in defining and understanding well-being has been the emergence of the positive psychology movement - the study of positive aspects and characteristics in an individual's life (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001). Positive psychology aims to contribute to effective human functioning while maintaining stable well-being (Gable & Haidt, 2005). However, positive psychology can have adverse effects as the emphasis on positivity could make people feel guilty or worse than before, if, and when they do experience negative thoughts or emotions (Held, 2004). Primarily there are two main historical perspectives associated with the term well-being that have guided modern-day research on the concept – hedonic well-being (HWB) and eudaimonic well-being (EWB) (Ryan & Deci, 2001). HWB conceptualised by Diener (1984) who explored the concept of subjective well-being, relates to an individual's assessment of their own life and its quality (Ryan & Deci, 2001). Ryff (1989) conceptualised EWB through his exploration of psychological well-being. This concept explores needs and qualities that are said to be “essential for one's psychological growth and development” (Tov, 2018, p.2).

From an educational perspective, the concept of flourishing is now being linked to student well-being in policy making and teaching. Flourishing describes individuals who are said to be functioning well in life, from a psychological perspective (Seligman, 2011). Seligman's (2018) PERMA model is being used as a framework in the Irish Junior Cycle programme and contains five elements or ‘building blocks’ for flourishing: positive emotion, engagement (flow), relationships (positive), meaning, and achievement (Seligman, 2018). Notably, education for flourishing must be moulded into all aspects of the curriculum for its successful implementation (Brighouse, 2006), although the rigid and exam-focused nature of many curricula poses potential challenges to its application (Kristjansson, 2017; Smith et al., 2022). Another challenge relates to teachers' preparedness and competence to teach well-being to students (Guler-Nalbantoglu & Aksu, 2021). Additionally, teacher well-being can affect the quality of student learning experiences, behaviour, and academic achievement (Corcoran & O'Flaherty, 2022; Devaki et al., 2019; Hall-Kenyon et al., 2014). If teacher well-being is not maintained, it can lead to stress, exhaustion and burnout and potentially lead to a loss of motivation for teaching (Bethune & Kell, 2020).

Well-Being in the junior cycle curriculum

In 2014 the first major interdepartmental policy framework related to the well-being of Ireland's youth titled *Better Outcomes, Brighter Futures: The National Policy Framework for Children and Young People 2014–2020* was published (DCYA, 2014). This was quickly

followed by the *Framework for Junior Cycle* in 2015 which indicated that students must undertake 400 h of learning related to the area of well-being. These 400 h of learning are guided by the *Junior Cycle Well-being Guidelines* developed by the NCCA in 2017 (updated in 2021). As part of these guidelines, six well-being indicators were developed for the teaching and promotion of well-being: Active, Responsible, Connected, Resilient, Respected and Aware. Each indicator links to well-being, and a combination of each can lead to positive student well-being (NCCA, 2021). Whole-school responsibility is now the dominant narrative regarding the optimal pedagogical approach for the effective implementation of well-being in Junior Cycle (NCCA, 2021), requiring buy-in from all staff to ensure students feel supported (Weare, 2013). That said, particular emphasis is placed on the importance of Physical Education (PE), Social, Personal and Health Education (SPHE), and Civic, Social and Political Education (CSPE) teachers to deliver well-being (NCCA, 2021). The Junior Cycle Wellbeing Guidelines (NCCA, 2017, 2021) aim to support schools in delivering a structured 400-h Wellbeing programme comprising Physical Education (135 h), SPHE (100 h), CSPE (100 h), and 65 h from other relevant learning areas such as guidance education or school-developed units. The guidelines also offer planning templates, sample units, and guidance on assessment and reporting. Complementing this, the Céim Standards (Teaching Council, 2020a, b) require ITE programmes to embed well-being, inclusive education, and reflective practice, promoting care, diversity, and professional growth. Additionally, the SPHE Toolkit (SPHE, 2023) provides resources aligned with the SPHE short course, covering key topics like personal safety, mental health, substance use, and RSE. Delivery of the Well-being curriculum could be considered somewhat arbitrary, as schools are asked to create their own programmes based on guidelines/indicators. Farrell and Mahon (2022) argue that the approach to well-being and mental health in post-primary education is flawed. They contend that the formalised approach (400 timetabled hours) to its teaching and promotion can diminish teacher-student relationships due to the “unauthentic nature of interactions related to well-being” (p.53). It should not be entrusted to the curriculum but reflected in “how a school treats its teachers as well as its students” with more focus on relationships and the importance of them (Farrell & Mahon, 2022, p.53).

Methodology

The current study employed a sequential mixed-methods design involving two phases (Creswell & Creswell, 2018). This approach was selected to utilise the complementarity and strengths of both qualitative and quantitative research methods (Creswell & Creswell, 2018; Tashakkori et al., 2020). Phase 1 comprised of a survey with pre-service technology teachers (PSTTs) ($n = 56$), and Phase 2 comprised online semi-structured interviews with PSTTs ($n = 22$) drawn from Phase 1. The study was framed by the following research questions: 1. What do pre-service technology teachers understand about well-being, and what are their perceived levels of preparedness to teach and promote well-being within Irish post-primary schools? 2. What are the perceived challenges and opportunities to the teaching and promotion of well-being from the perspective of pre-service technology teachers? Ethical clearance was granted from the relevant institutional Research Ethics Committee. Participants’ informed consent was gained. It was highlighted to each student from the beginning that all responses obtained from the Phase 1 surveys would remain anonymous, and pseudonyms would be used for anyone who wished to volunteer for Phase 2

interviews. These strategies aided in safeguarding participants' anonymity (Thomas, 2017; Tashakkori et al., 2020).

Methods and Participants

The first data collection method used was an online survey developed to explore pre-service technology teachers' (PSTTs) perceptions of the teaching and promotion of well-being within ITE (Phase 1). Survey questions explored demographical information; PSTTs interpretation and understanding of well-being (e.g. What does the term well-being mean to you?), and participants' access to opportunities to learn content related to the teaching and promotion of well-being (e.g. To what extent has your pre-service initial teacher education programme given you the opportunity to (a) gain a deep understanding of content relating to the teaching and promotion of well-being). The survey was distributed to the population ($n = 90$) of 4th year PSTTs in ITE in one higher education institution, resulting in a 62% ($n = 56$) response rate. Of the 56 participants who completed the online survey, 96.4% ($n = 54$) were aged 18–25 years, 91.1% ($n = 51$) were male, and 8.9% ($n = 5$) were female. These data align with data released from the Higher Education Authority (HEA, 2021) for the academic term 2020/21 which suggested that 87% of those studying on an undergraduate programme in Ireland were 23 years or younger, and that enrolments within particular fields, for example, architectural/engineering/technology-based programmes being largely male-dominated. All participants ($n = 56$) were studying to become technology teachers as part of a Level 8, Honours Bachelor's degree programme specialising in different subjects namely engineering technology education and architectural technology education.

The second data collection method used was an online semi-structured interview (Phase 2) with a sample of volunteer participants from Phase 1. The interviews took place two weeks after the closing date for the survey and were conducted over a three-week period. An interview schedule with pre-determined themes and questions guided the interviews to explore and dig deeper into the findings that arose from the Phase 1 survey. The key themes were: ITE, ITTE, well-being concept, well-being within Irish post-primary schools, and preparedness to teach well-being. The format for the semi-structured interviews allowed for the interviews to unfold in a 'conversational manner', with an informal tone, enabling participants to answer, discuss and explore answers in a relaxed open environment (Tashakkori et al., 2020). In total, 22 survey participants volunteered to participate in the semi-structured interviews. All interview participants had completed some 18 weeks of school placement (SP), which took place in year 2 and year 4 of the programme. 86% of the interviewees were male ($n = 19$), and 14% were female ($n = 3$). All interviewees were aged between 18–24 years and specialised in different subjects (engineering technology education and architectural technology education).

Data analysis strategy

Quantitative data from Phase 1 were analysed using the SPSS platform, and qualitative data was analysed using inductive thematic analysis (Clarke & Braun, 2014). During stage one the researcher became familiar with the data collected, transcribing the recorded interviews. Following transcription, the researcher re-engaged with the recorded interviews, this time with the printed transcripts, which allowed the researcher to take notes and code the data, noting potential themes or trends emerging from the discussions. Transcripts were then uploaded to the Nvivo software. During stage three, themes were extracted from the

data. Braun and Clarke (2006) recommend using a thematic map to make connections between emerging themes while visually articulating the subthemes associated with the discussion. During stage four, the researcher reviewed these themes and refined them further to develop more focused themes, eliminating repetition. During stage five, the themes were named, and the contents of each theme were defined (Braun & Clarke, 2013, 2019). A final visual thematic map was then developed in stage six, in preparation for reporting (stage six).

To ensure validity and reliability, this mixed-methods study employed multiple strategies. Quantitative and qualitative data were triangulated, enhancing the accuracy of findings. Validity was supported through careful sampling, and efforts to minimise bias through anonymous surveys, reminder emails, and rapport-building during interviews. Reliability was reinforced through piloting, thorough transcription checks, and participant verification of interview data.

Findings

Framed by the research questions guiding the study, the findings are presented in three sections: Understanding Well-being; Perceived Preparedness; and **Perceived** Challenges and Opportunities.

Understanding well-being

Nearly two thirds ($n = 5$, 62.5%) of survey participants indicated previous engagement with the area of well-being in an educational setting ($n = 19$) (e.g., primary school, post-primary school, third level); through independent research (e.g., books, podcasts, internet) ($n = 6$); and through personal experiences ($n = 2$) (e.g., professional counselling, dealing with stress). When asked about their understanding of ‘well-being’, many survey participants ($n = 42$) described it using terms such as “mental health”, “physical health” and “psychological health”. Some defined well-being by linking it to “emotional”, “psychological”, or “social” well-being. Other survey responses ($n = 16$) indicated that they associated well-being with self-esteem. Interestingly, 21 participants (37.5%) indicated that they had little or no engagement with the area.

Interview participants linked their understanding of well-being with psychological and physical health. 16 interviewees referred to ‘mental health’ when discussing their understanding of well-being, however, many of the participants’ responses were short and often vague. For example, Stephen suggested.

Probably kind of... I suppose good mental health and maybe maintaining mental health as well. It’s kind of... I think it links a lot with mental health, which has been kind of highlighted a lot for us because there’s a lot more people coming out with mental health issues, like I know, when I was in primary school, you never would have heard of mental health, it would have been something that was swept under the rug.

While Stephen made some associations between mental health and well-being, his response lacked depth. This pattern was reflected by six other participants, who all linked well-being with mental health. The lack of depth in some of the responses may be related to a lack of engagement with the topic as noted previously. Paul highlighted how he “never

engaged with well-being as a subject” but did state that he “may have unknowingly dealt with well-being through the teaching of my own subject”. Barry noted it was a term he had heard “about so much” but admitted he had little understanding of well-being. When asked about his understanding of well-being, Daniel replied “very little” but mentioned how he knew about its “integration in the new Junior Cycle”. Three interview participants provided more detail with regards their understanding of well-being, while they still linked well-being with mental health, they described it from social and emotional perspectives. Pat believed that well-being had links to social and emotional aspects of a person’s life and could be used to overcome problems at an individual level. William linked his understanding to emotions, and “emotional intelligence”, suggesting well-being as having an awareness of:

... all aspects of your own life, of a student’s life, that could be hindering their thoughts, their feelings, their approaches the things, their perceptions, and experiences on things.

Some interview participants linked well-being to self-esteem, again aligning with data from the survey. For example, Chris used the term “content” on many occasions suggesting that he associated well-being with life-satisfaction. Other participants used words and phrases such as “happy”, “feeling well”, “comfortable”. This may suggest that well-being for them was linked to their emotions and perceptions about themselves.

Interview participants commonly highlighted how they were “unsure” or knew “nothing at all” about well-being at Junior Cycle. Nine interview participants reported little or no understanding of Junior Cycle well-being. Josh believed that not enough emphasis was placed on well-being during the ITE programme. When the interviewer probed participants such as Barry, it was clear he had a vague understanding of the topic, highlighting how “they’re kind of all under one heading now like, they’re all under well-being and the Junior Cycle or whatever”. Some interview participants included reference to well-being as part of the Junior Cycle framework, suggesting that well-being formed a part of the Junior Cycle ‘Key Skills’. Barry’s response suggested he was unsure of the link between the two: “I know it’s one of the key skills; I think promoting well-being, isn’t it?”. Three others referred to the Key Skills, for example, they referred to the key skill of “managing yourself” in their responses but did not provide any further detail. Four interview participants alluded to Junior Cycle subjects that they believed were explicitly associated with the teaching and promotion of well-being CSPE, PE and SPHE. Michael and William demonstrated a greater understanding of the well-being framework at Junior Cycle. Michael referred to the 400 h allocated to student well-being at Junior Cycle, while William discussed the well-being framework. Both gained this understanding during their fourth year ITE school placement (SP) experience through the teaching of SPHE and by getting involved in the school’s “mental health community”. When interview participants were asked if they were aware of the well-being indicators at Junior Cycle, the majority highlighted that they were unaware.

It was interesting to note that 100% of survey participants ($n = 56$) indicated that the teaching and promotion of well-being mattered to them, for example to aid with the holistic development of the students in their care ($n = 23$, 41%). Many mentioned the ability to maintain both mental and physical health and cope with the stresses of everyday life, using phrases like “looking after themselves...keeping active...keeping fit...eating healthy...improve your health”, when they discussed the importance of well-being and maintaining a healthy body. In his interview, Pat noted how he had completed some independent research into well-being and coping mechanisms, which he believed had a big impact on his own

life. He highlighted how he was better “able to deal with the stresses” and because of this, his life was “much better”. Gary suggested that well-being was important for “being able to cope with certain situations”. Interestingly, some interviewees referred to the importance of well-being in the context of the COVID-19 pandemic. Emma believed that the switch to online learning during the pandemic may have harmed young people’s well-being. She believed that students could be “bottling” up some of their feelings and the online environment was not a suitable place for students to open up to someone, be that a teacher or a peer.

Perceived preparedness

The second overarching theme identified from the data was participants’ perceived preparedness to teach and promote well-being within Irish post-primary schools. Some 57.1% ($n = 32$) of survey participants indicated that they would be prepared to integrate and promote well-being into their specialist subjects (26.8%, $n = 15$ did not know if they would be prepared, and 16.1%, $n = 9$ indicated they would not be prepared). While some interview participants indicated that student well-being was the responsibility of all teachers, suggesting it was “a part of the job” or that there was more to teaching than just “teaching subject content”. Others, such as Paul, believed that it should be the responsibility of specific teachers in the school (PE and SPHE teachers, the Chaplin, and the guidance counsellor) as many teachers are not adequately qualified to teach the content “having no experience in it”. Aiden suggested that the teaching and promotion of well-being would be the SPHE teachers “main job” but hoped that all teachers would be involved in its implementation in some way. William also discussed how the “SPHE [teacher], and the Chaplin, and the guidance counsellor would be the most predominant” in teaching well-being from his experience. Many other participants concurred with William, by highlighting that “they need to take the lead” within a post-primary school, due to the nature of those subjects and the “strong focus” on well-being in those subjects.

More than half of the interview participants reported that they felt unprepared to teach and promote well-being within an Irish post-primary school, referring to their level of content knowledge. Other participants felt they were somewhat prepared but highlighted how they would like to do their independent research on the area before they would be confident enough to teach and promote well-being. Michael suggested that as a teacher he would be happy to promote well-being throughout the school, but when it came to teaching it, he would be less confident, “I don’t know would I know enough about well-being. Even you said the indicators there, I wouldn’t have a clue of them off the top of my head”. Other participants reported feeling unprepared as they had not engaged with the subject of well-being in-depth during their ITE programme, with one interview participant suggesting that he “really wouldn’t know where to start”. Another highlighted how he was unsure if he could justify the inclusion of well-being in a lesson plan, even though it is now part of the curriculum at Junior Cycle. Some remembered covering aspects of well-being on the programme modules but felt not enough emphasis was placed on the area. Ben believed that for teachers to be better prepared to teach and promote well-being, a specific, long-term module should be dedicated to well-being: “unless they did [programme provider] a social-emotional learning or well-being kind of a module for us I don’t see it getting any better”. It was interesting to see this perspective emerge as it highlighted the participants’ awareness of the need to learn more about well-being through their ITE programme or continuing professional development (CPD). William highlighted how he would have liked to

explore more “pedagogical approaches” for the teaching and promotion of well-being as he felt he did not have enough strategies to teach and promote it effectively. Chloe mentioned how she did try to incorporate well-being into her lessons on SP but did not feel confident in her approach or with the strategies that she used:

I just think I need to be more knowledgeable of other ways I could promote it also like, you know. Ahh... I think that if I came up with a few more strategies, I'd be better again, if you know what I mean.

Interestingly, many interview participants believed an integrated approach to teaching and promotion of well-being in technology subjects would be best achieved by assimilating aspects of well-being into practical projects, design activities, Classroom Based Assessments (CBA's), and sketching activities. In contrast, other participants believed they were prepared but still needed to undertake further independent research to teach and promote well-being effectively. Josh suggested that because he had been successfully prepared to teach throughout the ITE programme, the subject content being taught should not matter. However, later in the discussion, he noted that he would need to “educate” himself and apply “sufficient time” to research, plan and prepare, for the lesson to be effective. This perspective was reinforced by Ben and Cathal who believed with some research they would gain confidence.

Perceived challenges and opportunities

This final overarching theme identified from the data related to participants' perceptions of the challenges and opportunities associated with the teaching and promotion of well-being within Irish post-primary schools. Interview participants placed more of an emphasis on the perceived challenges than perceived opportunities. The most common challenge related to issues with the curriculum, such as time, curriculum overload, and assessment. Other challenges related to teaching experience, teacher well-being, and teacher and student values.

Two of the most common challenges identified from the data were issues with “time” and “overload”, and as some referred to it as “the assessment-driven nature” of the Irish curriculum. Many interview participants reflected on their time on SP, discussing the pressure they felt to “get content covered”. Often this pressure was, as Emma noted, to get the “curriculum across” in time for the state examinations, stating “you do have to teach to the exam” because of the perceived significant focus on assessment. Seven interview participants discussed the emphasis placed on assessment, which had led to time pressures faced by teachers to prepare their students for exams. Jason and John highlighted how this culture often neglects student well-being. Jason believed that “well-being gets left behind”, and John articulated that there needs to be a shift in the focus of schooling in Ireland to a system which caters for the student's holistic development:

...like the main focus first is the grades, you know it's grades first and then everything else is second. So maybe we should change that, that you know a student should first go into school, you know, feel okay and then go into, you know, learning the content (John).

Other interview participants referred to teachers' level of experience as a potential challenge – both their observations of more experienced peers and as early career professionals. Barry reflected on his time on SP and noted that some of the more

experienced teachers had “lost all love with the job” and that it could be a challenge to get such teachers to implement well-being. Michael highlighted how he believed the Junior Cycle reform was a significant challenge for the more experienced teachers because “it’s a whole new Junior Cert”, and they may have needed to rethink their pedagogical approaches. This is echoed by Shannon, who talked about observations she made on SP, noticing how some of the more experienced teachers “were stuck in their ways” regarding their teaching. She believed these teachers “wouldn’t be able to fully immerse themselves in like, new ways”, which could be an issue for implementing well-being at Junior Cycle. Others discussed how they believed being a newly qualified teacher (NQT) would be a challenge citing their lack of knowledge of the teaching environment and a lack of relationship with students. These sentiments were echoed in survey responses, where 32.2% of participants indicated that they had not experienced opportunities to learn about teaching and learning methods specific to the teaching and promotion of well-being; explore literature related to effective teaching and promotion of well-being (46.5%) or how to present well-being content building on students’ prior knowledge (26.8%). In his interview, Paul noted that there must be trust between teachers and students if the teacher wants to promote well-being successfully. He highlighted how trust is essential “for them to open up and explain to me how they’re feeling”. Jason shared a similar opinion, believing that it can take a while to “settle in” and build relationships with the class as a new teacher.

Teachers’ and students’ beliefs and values were also suggested as potential challenges. Chris and Joe indicated that the teacher has the final decision on what is included in the lesson, and if the teacher does not support the teaching and promotion of well-being, then they do not have to include it. Interestingly, only Jason mentioned the teacher’s well-being when discussing the challenges for the teaching and promotion of well-being. He suggested that if a teacher is “in a negative frame of mind” when teaching a lesson, that can have a knock-on effect on the learning environment and thus, it would be a challenge for that teacher to promote well-being within the school. Ben and Josh suggested that students could pose a challenge. Josh noted that some students may not be as willing to “get involved” or “participate”, and this could negatively affect other students. Ben reinforced this point by highlighting how he believed that “student outlook” can be a significant hurdle. He feared that students may think the teaching and promotion of well-being was “stupid”, which could prove difficult for teaching it.

With regards to potential opportunities, interview participants seemed less confident and unsure. The most common responses related to opportunities in the classroom or throughout the whole school, and through the development and distribution of learning resources. Seven interview participants believed that the best opportunities for the promotion of well-being were at a whole-school level, suggesting that “school events” such as “well-being days...poster designing...Christmas days...guest speakers” provide opportunities for the promotion of well-being. Chris noticed the positive impact these events had on the students in the school:

...they just kind of enjoy themselves and get to know different people. I don’t know does that incorporate into it, but it definitely helped them, kind of, especially the first years, come out of their shell like talking to second years.

Others noted there was an opportunity to integrate well-being into the curriculum of current Junior Cycle subjects, thus promoting well-being in many classes as opposed to “a separate kind of a module as such”. Jack discussed how including “group work” in lessons can promote a sense of well-being and connectedness. Four interview participants

believed there were opportunities for promotion of well-being within the technology subjects through the completion of projects with a specific focus on well-being.

I suppose opportunities within our subjects anyway. You can create, you can give the students problems that can promote the key skills or the key attributes of well-being whether that's a practical project or doing your own research or stuff like that there (Ben).

Pat believed there were opportunities to enhance the teaching and promotion of well-being by providing more support and resourcing to those on ITE programmes, suggesting he felt "left in the dark" in terms of teaching for and about well-being. Joe suggested that more support was necessary and discussed how additional teaching and learning resources would benefit the teaching and promotion of well-being:

I suppose it was no direction on what you want to do within your class, it can seem to be up to yourself. Maybe if there was some kind of a policy or something to follow (Joe).

Emma shared similar views to Joe, suggesting that it would be much "easier" to teach and promote well-being and include it in lessons if more teaching and learning resources were available to teachers. It was clear from Joe and Emma's responses that there seemed to be a general knowledge gap amongst PSTTs with regards well-being policies and resources.

Discussion

The findings presented provide an overview of participants' perspectives on well-being, perceived preparedness to teach and promote it, and the challenges and opportunities associated with integrating well-being into technology education in Irish post-primary schools. These findings will be discussed in the context of extant literature in this section.

Understanding well-being

In this mixed-methods study, participants demonstrated diverse interpretations of well-being, often linking it to mental, physical, and psychological health, with some associating it with self-esteem and emotional intelligence, reflecting a range of perspectives. Interestingly, the WHO (2021) reflects links between health and well-being, describing health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p.2). Similarly, Aston (2018) identifies the link between physical health and well-being and how engagement in "healthy lifestyle behaviours can improve 'self-reported overall health' and 'overall well-being'" (p.13). However, 37.5% of the participants in the current study admitted to limited or no engagement with the topic, indicating a potential gap in foundational understanding. Many interview responses lacked depth, with vague or limited explanations, though a few participants offered more nuanced views, connecting well-being to emotional intelligence and holistic life aspects. This disparity suggests a lack of clarity or confidence among some participants, which aligns with previous literature, where well-being is linked to various perspectives, definitions, and concepts and could be problematic for the teaching of well-being in the curriculum (Deci & Ryan, 2008; Dodge et al., 2012). Huppert (2017, p.163), goes further suggesting that a major

challenge is the lack of a “universally” agreed definition for the term well-being. Furthermore, some participants in this study perceived well-being as a form of enigma, with responses often positioning it from a content perspective - contrary to policy discourse that emphasises learning *about* and *for* well-being (GoI, 2017) - leading to its consideration as “add-on content.” Additionally, the findings highlight a cultural shift, with mental health issues moving from historical invisibility to greater visibility in recent years, reflecting the findings of Malla and Gold (2024). The COVID-19 pandemic further amplified concerns about well-being, with participants noting its adverse effects on young people through online learning and social isolation.

The lack of understanding of well-being was perhaps understandable for this cohort. They entered the first year of their ITE programme in September 2017, which coincided with the release of the Junior Cycle well-being guidelines and Policy Statement (NCCA, 2017; GoI, 2017). The updated *Initial Teacher Education: Criteria and Guidelines for Programme Providers* (Teaching Council, 2017b) was also published which outlined the criteria that ITE programme providers were “required to observe” (p.7). This documentation provided no reference to learning requirements for well-being on ITE programmes. Potentially, this cohort may not have prioritised the area of well-being as it may not have featured predominantly in their learning experiences in ITE. For example, they may have prioritised the technology education or school placement aspects of their programme, or the barriers they perceived or experienced with regards inclusion of such content – which has previously been advanced in the literature (Conway et al., 2021; Doyle et al., 2017; O’Gallchoir et al., 2018, 2019; Pantzos et al., 2023; Power et al., 2024). Encouragingly, the *Céim: Standards for Initial Teacher Education* (Teaching Council, 2020a), which outline “the revised standards for ITE” (p.7), includes some reference to the inclusion of well-being with ITE. “Global Citizenship Education” is included as “a core element of all programmes” (p.14). This element incorporates personal and community well-being and should essentially “underpin all aspects of programmes of ITE” (p.14). Including this within the revised standards could potentially lead to greater incorporation of aspects of well-being within and across ITE programmes.

Perceived preparedness to teach and promote well-being

While previous studies have reported that teachers and PSTs feel prepared to effectively teach and promote well-being (Holt et al., 2024; Campbell et al., 2020, 2024; McCulloch, 2016), participants in the current study expressed mixed levels of preparedness to teach and promote well-being, with many feeling somewhat prepared, but 42.9% reporting uncertainty or a lack of confidence. Gaps in ITE programmes were highlighted, particularly regarding the limited emphasis on well-being content and pedagogical strategies. There was also a division in perceived responsibility, with some participants viewing well-being as a shared responsibility among all teachers, while others believed it should primarily fall to specific roles like SPHE or PE teachers, the Chaplain, or the Guidance Counsellor. Many participants emphasised the need for professional development, suggesting long-term modules or targeted training to better prepare teachers. While there was a willingness to independently research well-being, participants noted the importance of structured support and resources. Additionally, some suggested integrating well-being into existing subjects and activities, such as practical projects and group work, as a natural way to support student development.

Darling-Hammond et al. (2002) suggest that experiences of ITE may have an impact on perceptions about preparedness to teach, due to variations in teaching and learning experiences available for PSTs. This perceived unpreparedness or lack of confidence may potentially stem from the amount of school-based experience that the ITE students in this study had at the time. In total, they had experienced 18-weeks of school placement, completing roughly 10/12 h of teaching during each of these weeks. This time within the school environment was focused solely on the teaching and promotion of their specialist subjects of engineering or architectural technology, and not well-being specifically. Fitzgerald (2020) notes how PST competence and confidence to teach increases through hands-on experience within the classroom. In considering curriculum content and processes to support pupils' learning the NCCA (2023) highlighted several areas to enhance well-being including teaching specific skills to enhance well-being (e.g. self-regulation, emotional regulation, social skills, self-efficacy, self-concept); teaching specific elements of health (e.g. mental health topics); promotion of a sense of belonging in a school or classroom; the integration of well-being within subject areas and through the positive climate of the classroom and school; and being taught values through discrete content. The lack of engagement with this type of content and experiences during ITE may have impacted the participants' perceptions of preparedness to teach it. Professional accountability is also required as one of the underpinning goals of ITE is to create a teacher who can effectively develop their own professional practice. The teaching and learning of well-being or any area should not solely be the responsibility of ITE programmes. It is part of the curriculum, so teachers must inform themselves and keep up to date with their professional learning needs. This sentiment is also echoed in Teaching Council documentation, for example the *Code of Professional Conduct* (Teaching Council, 2016a), *Droichead: The Integrated Professional Framework* (Teaching Council, 2017a) and *Cosán: Framework for Teachers' Learning* (Teaching Council, 2016b).

Promoting well-being in schools is challenged by curriculum overload and time constraints, as the assessment-driven nature of the curriculum often prioritises exam preparation over holistic development, leaving limited time for well-being initiatives. Teacher well-being also emerged as a critical factor, with a teacher's mental state directly influencing their ability to promote student well-being. The OECD (2020) recognised that an overloaded curriculum can place negative pressures on both teachers to teach, and students to learn all the content associated with the curriculum. This aligns with findings from the *My Word Survey* (Dooley & Fitzgerald, 2012), which listed school, exams, and homework as the "top three stressors in adolescents' lives" (p.21). In exploring lower second level education in Ireland, Smyth (2016) and MacPhail et al. (2018) reported an approach to teaching focused on covering content "for the exam" (Smyth, 2016, p. 36), with little emphasis placed on active learning. Fundamentally, teacher and student well-being should "be of primary importance in curriculum design" (OECD, 2020) due to the ability of well-being to "enhance learning" (p.7). In Ireland, well-being now "underpins" (NCCA, 2017, p.9) the design of the new Junior Cycle programme, which is an encouraging sign. Printer (2020) however argued that introducing the new Junior Cycle framework reflected an "increase in neo-liberal objectives" indicating that the change was related to an emphasis placed on international test scores (such as PISA), and "efficiency and output" (p.330) by the DES and NCCA. Therefore, participants in the current study may have been impacted as they found themselves amid curriculum reform and implementation during this period, which can often be a stressful time within schools, leading to participants feeling overwhelmed (Gleeson, et al., 2015).

Teacher well-being greatly impacts positivity within the learning environment and positive learning experiences for students (Corcoran & O’Flaherty, 2022; Bajorek et al., 2014; Devaki et al., 2019). Bethune and Kell (2020) argue that teaching can be challenging if the teacher’s well-being is not maintained, potentially leading to exhaustion and demotivation. This is a challenge for the teaching and promotion of well-being but could be seen as a broader challenge for the whole school. Kwatubana and Molaodi (2021) suggested that teacher well-being can be promoted by “fostering belonging and inclusion” (p.110) and promotion of a sense of collegiality and collaboration within the institution – again emphasising the importance of the whole school community in the teaching and promotion of well-being. School management, in particular, is responsible for ensuring the appropriate supports are in place to support teacher well-being. Boakye and Ampiah (2017) highlighted many areas that can prove to be challenging for a newly qualified teacher (NQT) such as “curriculum, lesson planning, assessment, management, time, and school culture” (p.2) while dealing with the transition from education to the world of work. Nally and Ladden (2020) in their research into NQT’s in Ireland, found that they were “unprepared to assume full teaching duties after initial teacher education” (p.19), often feeling overwhelmed by a full teaching timetable. This suggests that the initial induction years could prove challenging for the teaching and promoting of well-being. NQT’s are already juggling so many aspects of teaching at this early stage of their career. Potentially the National Induction Programme for Teachers (NIPT), or Droichead could play a role in facilitating learning related to the teaching and promotion of well-being for NQT’s. Despite these challenges, participants in the current study also identified opportunities, such as whole-school initiatives like well-being days and activities that foster connectedness among students. Participants also saw potential in integrating well-being into the curriculum through group work, projects, and Classroom-Based Assessments (CBAs). Strengthening ITE programmes with dedicated modules and offering continuous professional development were suggested to bridge knowledge gaps and build teacher confidence. Improved teaching materials, resource guides, and access to external expertise were also highlighted as ways to enhance well-being promotion efforts.

Conclusion

Findings from the current study have significant implications for ITE programmes, highlighting the need for targeted improvements to better prepare PSTTs to understand, teach, and promote well-being effectively. By focusing on well-being in ITE, teachers will be better equipped to support the holistic development of their students, fostering academic success and personal growth. Early exposure to the principles of well-being can enable new teachers to contribute to a culture of well-being within their schools, benefiting students and staff alike. ITE programmes should incorporate dedicated, long-term modules focusing on well-being. These modules would introduce PSTTs to definitions and frameworks encompassing physical, mental, emotional, and social dimensions of well-being, alongside an exploration of the Junior Cycle Well-being framework, key skills, and indicators. The curriculum should emphasise the connections between well-being and holistic student development, aligning with broader educational goals. Additionally, explicit experiences of pedagogical strategies would equip PSTTs with tools to embed well-being into their teaching practices. CPD workshops and pathways should be incorporated into ITE to address real-life scenarios, problem-solving, and strategy

development for promoting well-being in diverse classrooms. PSTTs should also be encouraged to explore well-being topics independently through assignments, resource reviews, and projects. Collaboration should also be emphasised in ITE, fostering teamwork among PSTs from different disciplines to promote the cross-disciplinary nature of well-being. Teaching and promotion of well-being should be integrated with other aspects of teacher preparation, such as classroom management, differentiated instruction, and inclusive education, creating a more cohesive and interconnected approach.

Practical exposure is essential for PSTTs to understand how to teach and promote well-being in real-world settings. School placements (SP) should explicitly integrate well-being practices, offering opportunities for PSTTs to observe and participate in well-being activities and lessons. Structured mentorship during SP could guide PSTTs in reflecting on their practices and incorporating well-being into their lesson planning. Beyond the classroom, ITE programmes should facilitate PSTTs engagement in whole-school initiatives such as well-being days, events, and committees, fostering a comprehensive understanding of school-wide well-being promotion. To foster confidence, ITE programmes must ensure PSTTs understand the link between well-being and their specialist subjects, helping them see themselves as capable of teaching and promoting it. Addressing misconceptions—such as the idea that well-being is solely the responsibility of specific teachers is critical. The NCCA (2017) clearly highlights the necessity of a whole school approach to the teaching and promotion of well-being. The implementation of the programme should not be the sole responsibility of a few specific teachers in the school. It needs to be viewed as a whole-school endeavour permeating the curriculum and school environment. ITE programmes must prioritise teacher well-being by fostering self-awareness and equipping PSTs with strategies to manage stress and workload. Embedding well-being practices within the programmes - such as mindfulness sessions, peer support groups, and reflective practice - would model the importance of teacher well-being (O’Flaherty et al., 2024; Mitchell et al., 2023). Finally, ITE programmes must bridge the gap between policy and practice by ensuring PSTTs are familiar with policy documents and understand how to apply them effectively. Structured guidance should be provided on operationalising these policies in the classroom and throughout the school. Discussions around potential challenges, such as time pressures or student resistance, could prepare PSTTs with practical strategies to mitigate such challenges. By addressing these implications, ITE programmes can better prepare PSTTs to meet the well-being needs of their students, align with curriculum goals, and contribute to a healthier, more supportive educational environment.

To conclude, this mixed-methods study set out to explore the perspectives of a specific group of professionals, i.e. pre-service technology teachers’, on their preparedness to teach and promote well-being in Irish post-primary schools. In order to develop a more comprehensive understanding of the delivery of Well-being in post primary schools, there is potential for further research on the topic. Pre-service technology teachers may not have a full understanding of the complex nature and demands of teaching and its impact on their own well-being and its delivery to students in schools. There is potential for a longitudinal study in this area as technology teachers progress from ITE into their professional roles. In addition, a wider survey with NQTs and in-service teachers would be helpful in ascertaining a greater understanding of the opportunities and challenges of its delivery in practice in the context of policy and practice.

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