

Chapter # 25

THE IMPORTANCE OF THE ROLE OF PROFESSIONAL SOCIALIZATION FOR EDUCATORS AS THEY ENCOUNTER INNOVATION IN CURRICULAR AND ARTIFICIAL INTELLIGENCE TECHNOLOGY

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ABSTRACT

Teachers throughout their professional lives and their career experiences have long been the focus of educational research. Educators at all levels, including primary, secondary schooling, and tertiary education, are faced with increasingly complex demands placed on them by society, expanding role of education, curriculum reforms, the increasing use of Artificial intelligence technology in the classrooms, and diverse environments in which teachers work. It is recognized that teachers' professional experiences encountered during their early years of professional practice and their first teaching year, also known as an induction year, has far reaching implications for teachers professional learning, development as well as their subsequent teaching career. Consequently, teacher professional socialization and retention in the profession to a large degree depend on professional experiences encountered in their working environments during early teaching years.

Keywords: teacher professional development, professional socialization, organizational learning, educator career, subject teaching, innovations in curricula, tertiary education, Artificial Intelligence technology in tertiary education.

1. INTRODUCTION

This book chapter presents the findings from the three case studies: the Framework for teachers' professional socialization in schools in early years of teaching in Ireland; Encountering Artificial Intelligence technology and the need for ongoing socialization and communities of practice in the tertiary teaching profession; and the Importance of the role of professional socialization for new educators as they encounter innovations in curriculum.

2. CASE STUDY ONE: THE IMPORTANCE OF THE ROLE OF PROFESSIONAL SOCIALIZATION FOR NEW EDUCATORS

Early professional socialization of teachers in early years of profession has long been the focus of educational research in Ireland and elsewhere (Killeavy, 2001; Kozina, 2010, 2013; McGarr & McCormack, 2014; Eklund, 2018; Nally & Ladden, 2020). With a considerable focus of the beginning years of teaching is being from the perspectives of proposing various induction structures, there is a documented lack of research into teachers experiences in schools. There is also a limited understanding in the professional literature of the process by which teachers emerge in their careers and there is an increasing need to

explore the origins of beginning teacher concerns as well as the context of their early professional experiences.

The literature review further identified a lack of detailed research into early professional socialisation of newly qualified teachers in Ireland. Nevertheless, studies which have been conducted appear to have distinct limitations: they did not conduct a systematic inquiry into what happens to teachers as they progress with their first teaching year; featured limited samples and; were primarily focused on the merit and effectiveness of induction supports available to newly qualified teachers.

2.1. Methodology

The case study one draws on a large-scale mixed-methods research. The data for this study was collected by means of a postal questionnaire administered to a sample of 1635 graduates of one tertiary higher education institution from both, the B.Ed (Bachelor of Education degree) and H.Dip (Higher Diploma degree) (primary) degree programmes; and a more recent desk-based literature review. The data was further supplemented by 52 semi-structured qualitative interviews with 26 teachers in their first year of teaching. The questionnaire data were analysed using SPSS 16.0, while interview data were analysed according to the guidelines suggested by Miles and Huberman (1994) and Patton (2002).

The 52 interviews were conducted for the in-depth exploration of the first year experiences of beginning teachers. We sought to get more elaboration on the findings in regard to teacher socialisation which was not solely possible with just using quantitative results. It was evident that the questionnaire data would not provide sufficient insights into experiences of teachers, and it was believed that the interviews would provide more detail on numbers in the questionnaire and allow for more in-depth analysis of the recurrent issues.

The qualitative data was analysed by developing categories of information which then compared for each participant for divergent and convergent themes, and data triangulation. This approach is specifically used to work with unstructured data allows building a framework from most of the data. The analysis of these socialization experiences was principally conducted for the mainstream classroom teachers.

With regard to answering the research questions and interpreting the results, quantitative and qualitative data carried the same weight when interpreting and drawing conclusions from this study. The corroboration of numerical and textual data was achieved by matching quantitative and qualitative codes when reporting and interpreting the data. In cases, where no quantitative items were available to support qualitative data, interview themes were discussed as special/deviant cases. The quantitative and qualitative data were initially analysed separately then combined and compared in the data presentation and discussion sections. The descriptive statistics were used to report on the dimensions of the quantitative data.

2.2. Results

The specific emphasis of this study was on exploring early professional experiences of primary teachers in their first teaching year. The literature review on the issues, challenges and processes by which teachers emerge early in their careers has shown that the existing models and perspectives on teacher socialization, learning and development do not allow for a complete understanding of how new teachers become fully-fledged professionals and proceed through their first teaching year. It appeared that teacher socialization is a highly individualised process, which is dependent on the combination of personal characteristics of teachers and the context of their working environments (see the summary of the literature review findings from various sources and references to specific literature presented in Figure 1).

Based on the in-depth desk-based literature review (some of the sources presented in Figure 1) the following conclusion could be drawn, firstly that the general concept of socialization has its origins in three disciplines of psychology, sociology and anthropology. Psychology looks at the development of the characteristics of individuals which are relevant to social behaviour and the processes by which such development proceeds. Sociology focuses on the interactions in groups, social relations and how individuals and groups are socialized. It also considers the impact of institutions and the organisational settings in which socialization occurs. Anthropology considers socialization from the standpoint of the broader culture, constituted by a set of shared norms and beliefs and behaviours which helps to determine the overall content and scope of socialization. In particular, roles and role systems are central to the anthropological field as by and large, individuals have to confront potential new roles throughout their life-course. Importantly, regardless of whether the focus is on the development of personal or social identity or on the adaptation of the individuals to formal and informal norms of the specific groups and society, it is important to recognise that all experiences occur in social contexts - some very formal, organised and structured and others less so. The empirical uses of the term of teacher socialization have been generally influenced by a number of distinctive research traditions in which to look and understand the process of teacher socialization.

Figure 1.
Approaches to study teacher socialization.

Structural-Functionalist approach	Studies
<u>Underpinning assumptions:</u> Origin - French tradition of social thought (Durkheim, 1938), which holds the general possibility providing true explanatory and predictive knowledge of the studied phenomena. Aims at giving precise explanations to how society is organised and how it functions. Within teacher socialization framework the main focus is placed on teachers' inculcation of knowledge, skills and attitudes which are fundamental to teaching profession. The emphasis is on the measurement of teachers' attitudes and orientations toward their role and a variety of educational matters, before and after a certain period; and subsequent determination and explanation of the occurred change. Particular attention is given to the period of formal education in teacher training institution and its influence on the orientations of prospective teachers. The importance of teachers' subjective experiences and their interpretation is diminished. In order to become a member of the teaching profession, a teacher has to confirm to the norms, values and behaviour patterns associated with the profession. Research methods – quantitative (eg. questionnaires)	(eg. Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Drew, 2006; Gilbert, 2005; Kelly, 1970; Killeavy, 1998; Lortie, 1975; San 1999; Smith & Ingersoll, 2004)

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Interpretative	Studies
<u>Underpinning assumptions</u> Origin - German tradition of social thought (Weber, 1965), which serves as umbrella for the following schools: hermeneutics (Gadamer, 1975), ethnomethodology (Garfinkel, 1967) and phenomenology (Schütz, 1967). Specific focus is on the “emergent nature of social organisation” (Burrell & Morgan 1979, p. 108) rather than on its structure. Within teacher socialization framework the main emphasis is on understanding of the process of becoming a teacher. Looks at teachers’ interpretation and subjective meanings which they give to their experiences. It also aims at getting an insight into whether and how teachers’ behaviour changes according to the demands of particular situations. Research methods - qualitative (eg. interviews, observations)	(eg. Hebert & Worthy, 2001; Lacey, 1977; Kauffman, Moore, Kardos, Liu, & Peske, 2002)
Critical (conflict model of socialization)	Studies
<u>Underpinning assumptions</u> Origin - Frankfurt school of critical theory, based upon Marx’s system of philosophy. Within teacher socialization framework the importance is given to both human agency and structure during the socialization process, while the teacher is at the centre of attention (Weiler, 1993). The questions of power imbalance, inequality and repression, which are mediated by power configurations within the teachers’ work context are raised and investigated. Research methods – mixed qualitative and quantitative (eg. questionnaires, interviews).	(eg. Kuzmic, 1994; Kelchtermans & Ballet, 2002)

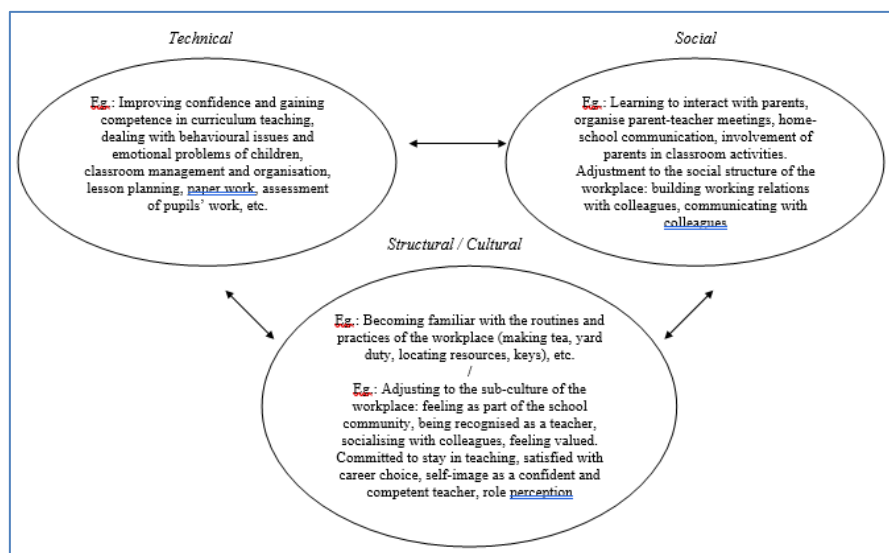
In particular, these traditions generally determine the way the research on teacher socialization is carried out, the type of questions it is trying to answer, the methodology it employs and how the gathered data is presented and interpreted.

More specifically, teacher professional socialization in the first teaching years, as was shown in this mixed methods research, in a broader sense reflects a process through which teachers become more competent in applying acquired knowledge and skills and which reflects teachers’ assimilation into their local working environments, as well as the culture of the profession.

Within the context of the case study one, the findings from teachers’ responses are presented from the perspectives of the issues within challenging of classroom teaching, self-image and school environment.

A three-dimensional model of teacher socialization developed as a result of this study within which relevant factors and teachers’ experiences can be explored and discussed has three interwoven domains as presented in Figure 2: *technical, social, structural / cultural*. Within the context of this study, they reflected teachers’ professional experiences within the areas of classroom teaching, relations with pupils, parents, colleagues, teachers’ self-image and teachers’ assimilation into sub-culture of their working environments as well as the culture of the profession. In addition, the first domain reflects the experiences of classroom teaching as beginning teachers gradually gain their competence and confidence in application of knowledge and skills acquired during their time in teacher education college in the process of their gradual induction into the life of a teacher.

Figure 2.
Developed three-dimensional framework for teacher socialization
(experiences in the first teaching year).



From the discussion above it appears that the concept of teacher socialization falls short of conceptual clarity. The research in most cases attempts to provide examinations and descriptions of teacher socialisation thus, capturing a multidimensional nature of this phenomenon. The research presented in case study one has shown that the outlined models and perspectives on teacher socialization and development do not allow a complete understanding of how new teachers learn to teach, become fully-fledged professionals and proceed through their early teaching years. A three-dimensional model of teacher socialization developed as a result of this study (presented in Figure 2), nevertheless, can enrich our understanding of the issues, challenges and processes by which teachers and educators emerge in their early careers. It appears that teacher socialization is a highly context specific and individualised process, which is dependent on the combination of personal characteristics of teachers and the context of their working environments.

2.3. Future Research Directions

The research in a case study one has collected empirical evidence on primary teachers' professional socialization, specifically teachers' professional experiences faced regularly in classrooms and a wider school environment. The focus was on how newly qualified teachers progress through their first year of teaching. The findings have implications for future pre-service preparation of primary teachers and provision of induction support in their first year of teaching. The findings from this research may be used in production of teacher training materials, making recommendations on policy making, and design of effective induction programs.

3. CASE STUDY TWO: ENCOUNTERING ARTIFICIAL INTELLIGENCE TECHNOLOGY AND THE NEED FOR ONGOING SOCIALIZATION AND COMMUNITIES OF PRACTICE IN THE TERTIARY TEACHING PROFESSION

At the tertiary teaching level within larger colleges and universities educators can be siloed within disciplines with less opportunities for socialization beyond their immediate colleagues and students. Yet all disciplines regardless of their topic are subject to the use of overarching technologies within the classroom. These include databases hosting lecture notes, submitted assignments and online exams and workbooks. One of the greatest disruptors within the educational system has been the emergence of artificial intelligence (AI). As with all disruptors it can be welcomed or feared. The role of peer communities during this period is essential.

To address this challenge with staff one tertiary college took a holistic approach to AI implementation and provided a range of supports. The enablers and barriers of successful implementation have been well documented and are summarized in Figure 3. We can see from this table that it also reflects the three dimensional framework identified earlier in Figure 2. The importance of the socialization of the technology across stakeholder groups, the importance of a supportive culture in terms not only of physical resources but also from leadership and wider college supports and finally the importance of wider technical training.

Figure 3.

A summary of implementation enablers to be addressed when introducing AI technology to third level educators (adapted from Burke, Morris, & McGarrigle, 2012).

Enablers	Stage of Implementation			
	1. Exploring and preparing	2. Planning and resourcing	3. Implementing and operationalizing	4. Business as usual
Leadership				
Resources				
Educator consultation and buy-in				
Supportive college culture				
College support				
Implementation plan				
Implementation teams				
Staff training				
Communication				
Monitoring and evaluation				
Learning from experience				
Barriers across the implementation stages	External environment; resistance to change; vested interests			

Within one tertiary college many of these aspects were addressed to enable the educators, students and professional and administrative staff to learn about the benefits and challenges of AI in relation to their role.

Leadership invested in developing a series of introductory workshops where peer educators could share learnings on AI technology over a lunchtime event. This created both an opportunity for socialization and for learning within a supportive and open environment. Questions could be asked, fears expressed and knowledge shared. The ethics of AI were also addressed (Foltynek et al, 2023).

Additional enablers were addressed through the consultation and drafting of an AI policy. This draft was shared amongst all levels of staff for input and comment. This demonstrated a supportive college culture, leadership and good shared communication and discussion of the policy in smaller discipline groups. It enabled the socialization of the policy and its communication among staff in an open dialogue.

Finally, to enable AI development, small bursaries were offered to staff in the form of innovation teaching awards. These could be used by educators to trial and test AI and other technology in the classroom. This also addressed and added to the important enabler of resourcing. One such successful project was in the use of AI to teach and interpret statistics within a cohort of healthcare students. The International Association for Statistical Education demonstrated that students learning introductory statistics often struggle to understand and apply the concepts of statistical modelling and the logic of hypothesis testing. To address this an Artificial Intelligence (AI) assisted Statistical Support Web teaching tool was developed. The pedagogical underpinnings of this innovation included the Learner-Centred Approach and the Problem-Centred Approach, both of which are recommended approaches for teaching natural science and technology (Comiskey, Basa, Banka-Cullen, 2023). The web app aimed to provide personalized recommendations based on the imputed student's study question. In summary, it was anticipated that the approach had the potential to significantly enhance student learning outcomes and prepare future healthcare professionals and future healthcare educators for success in an AI data-driven world.

To conclude, the need for sustainable, communities of practice which support the ongoing socialization of educators as they progress through their careers from early to later stage is essential. In a world where we are faced with constant disruptors be it local or community initiatives or global pandemics, conflicts or international AI developments, this need has never been greater.

4. CASE STUDY THREE: THE IMPORTANCE OF THE ROLE OF PROFESSIONAL SOCIALIZATION FOR NEW EDUCATORS AS THEY ENCOUNTER INNOVATION IN CURRICULAR

The socialization of new educators is a process of both formal and informal learning. Acquiring the necessary skills, knowledge and behaviour to be effective educators is firstly gained through a formal education of theoretical and pedagogical programmes. This is followed by a period of adaptation with guidance and mentorship from professional teaching colleagues, within a school culture. The socialization of new educators is greatly influenced by their environment and the school culture which implicitly shapes their expectations and values as educators. Influential mentoring and socialization significantly enhance professional identity, integration with peers, and enriches teaching practices for new educators (Zeichner, 2010). With superior socialization comes greater contribution and innovation within teaching practice, to tackle curricular changes. By fostering a network of

mentors and colleagues, new educators absorb new technologies, innovative practices and stay flexible to curricular challenges. Professional socialization provides new educators with strategies to better implement curricular innovations within the school culture (Day & Gu, 2010).

However, as new topics emerge on the curriculum, for example Social, Personal and Health Education (SPHE), which is a mandatory subject taught in both junior and senior cycles, challenges are evident. New educators may return to school in September to find an SPHE classes on their timetable without any prior knowledge or training. New educators may feel overwhelmed or inexperienced to discuss and tutor adolescent students on topics such as gender identity, sexual relationships and substance use. This requires new educators to manoeuvre through a minefield of inclusivity and non-discriminatory language not to inadvertently cause offence to any of their students. The relaying of personal experiences and the relaying of student's experiences are discouraged during classroom discussions and workshops, adding to the complexities of navigating these sensitive topics. As a non-exam mandatory subject on the curriculum, it is often unconsciously relegated in comparison to the core subjects without realising new educators may feel professionally uncomfortable and incompetent to teach a subject which requires an adjustment to their teaching methods.

Through professional development and collaborative networking, experienced educators need to enhance the levels of confidence and efficacy in the teaching of sensitive topics. New educators need to feel part of a professional learning community, where professional socialization and mentorship offers opportunity for sharing challenges and the development of creative solutions (Paula & Grindfelde, 2018). Once new educators are integrated into their professional communities a more diverse range of perspectives and professional creativity can be adapted, which is culturally appropriate (Gay, 2018). As new educators feel supported through professional socialization within their educational communities, they are more likely to adapt to change, initiate innovative practices, and adopt on-going professional learning throughout their career.

5. CONCLUSION

This book chapter presented the findings from the three case studies: the Framework for teachers' professional socialization in schools in early years of teaching in Ireland; Encountering Artificial Intelligence technology and the need for ongoing socialization and communities of practice in the tertiary teaching profession; and the Importance of the role of professional socialization for new educators as they encounter innovations in curriculum.

In conclusion, a positive professional socialization of new educators is fundamental in developing efficacy and successful adjustment amidst changing curricula. Therefore, schools must foster collaborative networks amongst their educators to ensure new educators are well inducted, mentored and supported to become competent and innovative in their practices to meet the needs of their students.

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