

**APPENDIX 1. SUMMARY OF KEY FINDINGS FROM EACH INCLUDED ARTICLE THAT EXAMINES THE COMPONENTS OF PROFESSIONAL IDENTITY FORMATION RELATED TO INTERNSHIP PROGRAMMES.**

<b>Author (year)</b>	<b>Objectives</b>	<b>Participants (Sample size)</b>	<b>Method</b>	<b>Conclusion</b>
O'Sullivan, van Mook, Fewtrell, & Wass (2012)	This paper presents a framework for ensuring professionalism is effectively integrated into a curriculum in a positive way and addresses the challenges which face educationalists in making professionalism an integral and explicit part of training and subsequent practice.	NA	NA	The paper concludes that instilling professional values and appropriate behaviours at the time of training was inadequate. Although the ability to reflect, adapt to uncertainty and be flexible was essential, fixed frameworks were often taught and assessments were made using objective structures, all of which foster certainty and standardise behaviour. Different approaches to training were suggested, including assessments which must be carefully programmed to foster a positive non-punitive approach thus demonstrating the value placed on striving for excellence.
Ackerman, Graham, Schmidt, Stern & Miller (2008)	This study aimed to evaluate the most critical events in the lives of interns.	41 internal medicine residents	Each resident was given 15mins to respond in writing to three questions of a recent high point, low point, and patient conflict.	The high points, low points, and conflicts reported by early residents surfaced six themes which reflected critical challenges interns face the development of their professional identity. Program directors could use this process and conceptual framework to guide the development and promotion of residents' emerging professional identities. The six themes are: confidence, life balance, connection, emotional response, managing expectations, and facilitating teamwork.
Clandinin & Cave (2008)	This study aimed to develop a pedagogical strategy for engaging family medicine residents in writing parallel charts and participating in small group sharings and discussion about their charts.	This study draws on a 2006 study carried out with four family medicine residents into the potential of writing, sharing and inquiring into parallel charts in order to help develop doctor identity.	Each resident wrote 10 parallel charts over 10 weeks. Residents met bi-weekly as a group with two researchers to narratively inquire into their stories.	The process shows the importance of creating pedagogical spaces to allow doctors to tell and retell, through narrative inquiry, their stories of their experiences. This pedagogical approach creates spaces for doctors to individually develop their own stories by which to live as doctors through narrative reflection on their interwoven personal, professional and cultural stories as they are shaped by, and enacted within, their professional contexts.
van der Zwet, Zwietering, Teunissen, van der Vlueten & Scherphier (2011)	This study aimed to clarify how medical students learn by participating in general practice and the role of the socio-cultural context therein.	44 undergraduate medical students.	Group interviews	The results demonstrate how the concept of developmental space is created through the intertwining of the workplace context, individual and professional interactions, and emotions such as feeling respected and self-confident. These forces frame students' activities and thereby determine how much room is created to enable them to mind their own professional development.

Lordly & MacLellan (2012)	This study aimed to understand the processes of identity development and professional socialization among undergraduate dietetic students during their education.	13 students in their final two years of an undergraduate dietetics programme	Three interview were conducted with each participant.	It was found that professional identity development begins before dietetic education and develops within the context of that education, representing the intersection of both people and events. A recognition and understanding of these complexities can result in strategic recruitment, informed curriculum changes, and professional development opportunities for dietetic educators, which will enhance their ability to support students in the professional socialization process.
Smith, Tallentire, Cameron & Wood (2013)	This study aimed to explore medical student views regarding the ways in which contributing to patient care influences their learning, and to develop a theory, grounded in the data, which explores the effects of contributing to patient care on student learning.	33 final year medical students who had been allocated to Queen Margaret Hospital for general medicine or geriatric medicine attachments.	6 focus groups with 4 to 7 participants per group; and field notes.	The study found that the unifying concept was development as a professional. This study has demonstrated that contributing to patient care enhances students' development as professionals. Some of these developmental outcomes, such as improvements in knowledge and skills, may be achievable to some extent within the classroom. Other changes such as developing relationships, forming a sense of professional identity and modifying attitudes, might arguably be achievable only within the context of contributing to patient care.
Hendelman & Byszewski (2014)	This study aimed to identify lapses in professionalism witnessed by medical students during their four year MD curriculum, and to categorize, from the students' perspective, who was responsible and the settings in which these occurred.	255 out of 559 population	Electronic survey which included quantitative responses and some open-ended opportunities for comments.	This study emphasizes the importance of role modelling and the need for faculty development, to improve the learning environment.
Johnson & Chauvin (2016)	This study aimed to examine the extent to which reflective essays written by graduating pharmacy students revealed professional identity formation and self-authorship development.	Graduating pharmacy students	41 reflective essays	Analysis of these essays facilitated the development of an interpretive framework that can be used to understand and purposefully facilitate professional identity formation and self-authorship development.
Knez (2016)	This paper reviews empirical research on the impact of work-related identity on employee satisfaction.	NA	NA	A conceptual model of the work-related self was proposed, encompassing time and two basic psychological elements: 1. Emotional component comprising the process of work-related attachment/belonging/closeness, and 2. Cognitive component comprising the processes of work-related coherence, correspondence, temporality/mental time, reflection and agency.

Lasson, Just, Stegeager & Malling (2016)	This study aimed to explore how group-coaching might facilitate professional identity formation among junior doctors in the transition period.	45 junior doctors	Observations, open-ended questionnaires and interviews	The participants found that the group-coaching course supported their professional identity formation (thinking, feeling and acting as a doctor), adoption to medical culture, career planning and managing a healthy work/life-balance.
Mazerolle, Eason, Clines & Pitney (2015)	The aim of this study was to understand the socialization process for graduate assistant ATs during their graduate experience.	25 graduate assistant	30-45mins individual phone interviews	It was found that socializing the graduate assistant blends both formal and informal processes. The transition to practice is a critical aspect of the profession; thus, supporting autonomous practice with directed mentoring can promote professional maturity.
McLean (2015)	To explore registered nurses' perceptions of their contribution to medical students' developing professional identities in order to provide a greater understanding of this process and ultimately inform future curriculum.	8 registered nurses	1hr semi-structured interviews	The study found that role modelling good practice facilitates students' transition to clinical practice.
Mylrea, Gupta & Glass (2017)	This study aimed to examine the conceptual frameworks aligned with professional identity development and to explore the role for self-determination theory (SDT) in pharmacy professional education.	NA	NA	A self-determination theory, a motivation-based theory, was proposed as a theoretical framework for professional identity in pharmacy tertiary education.
Petrilla, Fireman, Fitzpatrick, Hodas & Taussig (2015)	The study aims to describe components of the FHF internship that were hypothesized to lead to a positive field experience for interns.	102 interns	Post-programme survey administered over a 9-year period	The results from the surveys demonstrate that the training program was successful in meeting the perceived needs and supporting graduate student interns. 9 recommendations for developing quality internship were proposed.
Pfund, Byars-Winston, Branchaw, Hurtado & Eagan (2016)	The study aims to propose core attributes of effective mentoring relationships.	NA	NA	This paper proposes core attributes of effective mentoring relationships. In addition, both existing and developing metrics for measuring the effectiveness of these attributes within mentoring relationships across diverse groups are presented, as well as preliminary data on these metrics from the authors' work.

Vivekananda-Schmidt, Crossley & Murdoch-Eaton (2015)	The study aims to report a data driven model of PSI formation in healthcare students.	17 student doctors and dentists	Interview	Students' experiences and their perceptions of those experiences, can be evaluated through a simple model that describes and organises the influences and mechanisms affecting PSI. This empirical model is discussed in the light of prevalent frameworks from the social science and psychology literature.
Welch, Spooner, Tanzer & Dintzner (2017)	The study aims to design and implement a longitudinal course series focused on professional development and professional identity formation in pharmacy students at Western New England University.	NA	Round table discussions	A professional development course series was designed and implemented in the new Doctor of Pharmacy program at Western New England University to enhance the professional identity formation of students.
Zhao & Zhang (2017)	The study aims to investigate the changes of pre-service teachers' professional identity during an internship and analysis of the reasons and factors behind the development.	98 (out of 140) pre-service teachers and 12 (out of 98) teachers.	Quantitative survey and qualitative interview.	Compared with professional identity before the internship, pre-service teachers' professional identity increased after the internship; specifically, intrinsic value identity increased while extrinsic value identity remained steady. Mentor supports in field school were important factors.
Andersen (2015)	This study aims to generate grounded theory about whole staff professional development driven from "inside" the workplace, as opposed to development based on typical "top-down" or "bottom-up" strategies	2264 teachers	Focus group interviews	It was found that when affiliate groups of teachers systematically increase their understanding of factors which create and sustain challenges in their workplaces, they improve their analytical competencies, professional identity and self efficacy.
Birden et al (2016)	This study aims to determine how well junior doctors were trained for their role, and what aspects of that training were particularly useful.	14 junior doctors	Interviews	The advantages found in the training these junior doctors received which prepared them well for internship were integral both to the longitudinal, unstructured placement, and to the fact that it was carried out in a rural area.
Correa et al (2014)	This study aimed to describe, analyse and interpret the ideas, representations and experiences that go into building a professional teaching identity.	Two pre-service teachers	Online forum discussion	Theory of Communities of Practice: learning cannot be dissociated from the social situation in which it occurs. Positioning Theory: in order to give meaning to a set of utterances or a conversation, one has to examine the position, the storyline and a relatively determinate speech-act
Crossley et al (2009)	This paper discussed the development of a tool to monitor the development of professional self-identity.	496 student doctors	NA	The 9-item questionnaire indicates a three-factor structure reflecting 'interpersonal tasks', 'generic attributes' and 'profession-specific elements'.
Gazzola et al (2011)	This study aimed to contribute to the discourse on professional identity of counselling psychology identifying themes that resonate with trainees.	10 graduate students	Semi structured interviews	The study found seven categories of experiences which participants perceived as fostering their sense of professional identity: 1. The experience of providing services to clients ,2. The positive influence of institutionalized training, 3. Giving and receiving supervision, 4. The importance of role models and mentors, 5. A resonance

				between the personal and the professional, 6. An induction into the professional community, and 7. An emerging sense of expertness.
Gibson et al (2010)	This study aimed to provide a theory of professional identity development from entry into the program through the completion of internship.	43 students	Focus group interviews	The study resulted in the developmental grounded theory of the transformation of counsellor professional identity in Counsellors In Training.
Hoffman (2014)	This study aimed to explore how field experiences complement, diverge from, and intersect with classroom experiences.	16 students	NA	The paper focussed on three aspects of PI: (1) professionals develop skills, knowledge, values, and behaviours that look like those of other professionals in the field; (2) in doing so, they become identifiably different from those who are not part of that profession; (3) they identify themselves with their profession.
Holland et al (2012)	This paper aimed to analyse the concept of professional confidence, highlighting the attributes, antecedents, and consequences of professional confidence, and finally proposed a definition.	21 articles	NA	NA
Idzadinia (2013)	This paper aimed to identify the main foci of research on student teachers' identity, the methodologies used and their major finding.	29 studies	NA	NA
Idzadinia (2014)	This paper aimed to (1) Offer a deep insight into how identity is shaped in teacher educators. (2) Show what the building blocks of an effective teacher induction programme could be.	52 research papers	NA	NA
Lamote et al (2010)	This study sought the relevance of 'professional identity' within the framework of teacher education. It aimed to describe prospective teachers' perceptions of aspects of their professional identity at different times during the teacher preparation programme.	157 students from three course years in the bachelor course for secondary school teachers teaching 'general academic subjects'	Questionnaires	The study discusses the following: 1. Professional orientation and task orientation as indicators for student teachers' personal interpretation of their roles and tasks, 2. Self-efficacy of teachers, and 3. Commitment to teaching.
Michele et al (2011)	This paper aimed to share experiences and reflections on mentoring, and being mentored, in	Two participants	Personal reflections	The paper summarises mentoring relationships as reciprocal and, developmentally, interns and fellows are at a point to actively help set the

	the context of clinical geropsychology internship and fellowship training.			agenda for their supervision and mentoring needs.
Moss et al (2014)	This study aimed to investigate practicing counsellors' professional identity development at nodal points during their career.	26 counsellors	Focus group interviews	The study highlights 6 themes as influential to counselors' PI development: 1. Adjustment to expectations, 2. Confidence and freedom, 3. Separation versus integration, 4. Experienced guide, 5. Continuous learning, and 6. Work with clients.
Neve et al (2017)	This study sought to identify professionalism threshold concepts in a small group learning setting in undergraduate medicine and to understand factors that might facilitate students to 'get' such concepts.	15 students, 7 tutors		'Threshold concepts' which once understood, can lead to 'new and previously inaccessible ways of thinking about something' (Meyer and Land 2003).
Nor et al (2017)	This study aimed to explore patterns of professional identity development among medical graduates of a SPICES curriculum implemented by the USM medical school.	50 medical graduates	Focus group interviews	It was found that the formation of professional identity among USM medical graduates was related to self-development and professional development, suggesting that the USM medical curriculum is vital in shaping professionalism attributes among its medical graduates that are balanced among knowledge, skills, behaviours and values.
O'Reilly et al (2015)	This study aims to explore whether different technology-based methods supported student growth and skill development in reflective practice at separate developmental time points.	45 undergraduate dietetic students	Mixed methods survey	The study concludes that offering students a range of ways to engage in reflective practice over time supported their understanding and increased confidence in their reflective practice skills, thus potentially enabling a smoother transition into their profession where reflective practice is an essential and autonomous skill.
Reid et al (2008)	This study aimed to investigate how students developed a sense of identity with their profession, how the nature of the profession impacts on identity formation, how students engage with learning based on their professional expectations, and how their pedagogic experience leads towards their professional formation.	200 students	In-depth interviews	The study concludes that professional identity formation is a relation between students' learning experience and the manner in which they anticipate or practise in professional working life.
Rossi et al (2011)	This study focussed on the school and especially the departmental office or room as a site for workplace learning.	16 participants who had just completed their final professional workplace experience.	Semi-structured interviews journal entries	Both space and place are made and remade through networks that involve people, practices, languages and representations", suggesting that the "key question about space and place is not what they are, but what they do".

Sutherland et al (2012)	This study considers the role authentic learning experiences play in the transition from student to professional practitioner.	236 students	Online forum discussion	Professional identity is conceptualised as having two distinct but interconnected components: the interpersonal and the intrapersonal (O'neil and Segesten 1998).
Sweitzer (2008)	This study provides a theoretical lens for examining the doctoral student experience that accounts for the multiple relationships that facilitate or stifle doctoral student development.	Ph.D. students (n = 12), identified network partners (n = 19), and other faculty and administrators most involved with doctoral students during the first semester (n = 5).	Semi-structured interviews and direct observations	The findings of the study suggest that students who relied solely on network partners from within the academic community, and therefore had more access to redundant information, were more likely to have a fragmented view of the faculty career after one semester.
Tracey et al (2014)	This study explored the use of reflective writing assignments in an introductory ID graduate course with the goal of improving our understanding of how ID novices use reflection in support of precedent building and professional identity construction.	40 students	Reflective writing journals	The research findings indicate that reflective writing assignments are an avenue for supporting students as they explore their concepts, experiences, and beliefs related to design, which serve as the foundation for their emerging professional identities.
Trede et al (2012)	This study explored students' perceptions of clinical educators as teachers of reflection and what role students assigned themselves in learning reflective practice.	12 students	Semi-structured telephone interviews and reviewing students' written contributions made to an online forum	The study's findings demonstrate that developing reflective practice in workplace settings hinges on establishing trusting reciprocal student educator relationships, because such relationships seemed to cultivate reflective capabilities.
Weaver et al (2011)	This study explores the elements that contribute to medical students' sense of professional identity and investigates the concept of social exclusivity and how this might relate to students' development of their identity as medical professionals.	13 undergraduate medical students	Telephone interviews	Core assumption is that people have multiple social identities as they move through different social groupings.
Wiles (2012)	This study explores three common usages of the term 'professional identity'.	7 undergraduates	Semi structured interviews	Methodological assumption that individual talk is produced from a complex interweaving of the immediate context (the interview) and wider social debates.
Baglin & Rugg (2010)	This study looks at community-based nursing practice learning, including the factors that influence students' integration into, and experience of such learning. The current study sought to construct a robust, insightful, representation of student	6 female 2nd year nursing students	Reflective diaries	The study data showed that participants' expectations prior to placement were coloured by their understanding of what a community placement is or should be. Their ability to find meaning in their placement learning experiences appeared to be determined by their expectations, the support available, the learning outcomes set and the type of placements allocated.

	participants' community-based practice placement experiences, and the meanings that they ascribed to these experiences.			
Clements et al (2016)	This study explored the links between commitment and retention in student nurses and mid-wives. The study emphasized the impact of placement experiences on commitment via interpersonal relationships.	171 pre-registration students; 9 interviews	Semi structured interviews	The study found that students typically emphasised their professional identity as the basis for commitment, although many participants also highlighted a lack of acceptance by qualified practitioners, which reduced it.
Edwards (2017)	The study aims to advocate the use of stories as tools to assist mentors in their roles, and to express students' concerns, sensitivities and priorities about clinical placement experiences.	55 nursing students	Stories written by participants	The article illustrates the value of stories as learning tools in the workplace and, by looking at nursing students' stories about clinical practice, shows that paying attention to their concerns, sensitivities and priorities can improve the already significant role played by mentors in student learning.
Ferguson (2011)	This study explored nurses' perspectives on what makes a mentor effective, and how they engaged in mentoring relationships with their informal mentors.	25 registered nurses	Interviews	This study identified two key factors in the development of these mentoring relationships was 1. The relational connection that existed between new nurses and one of their more experienced colleagues in the practice setting, and 2. The perception of new nurses of the quality of the experienced nurses' practices.
Hinton (2015)	This study explored operating department practice students' experiences during their first placement.	6 students in Operating Department Practice	Focus group interviews	It was found important for students to feel welcomed and supported by the mentoring processes in order to foster a sense of belonging. Information given by the university should be accurate and effective. This can only be achieved by closer collaboration between the university and practice providers.
Jokelainen et al (2013)	This study examines the conceptions of Finnish and British mentors regarding the facilitation of placement learning and professional development of pre-registration nursing students.	22 Finland mentors; 17 UK mentors	Focus group interviews	This study highlights the importance of human and pedagogical approaches in the facilitation of students' placement learning and professional development.
Kay (2015)	This paper explores the concept and processes involved in professional socialisation and how mentors and nurse managers can help to foster positive aspects of this in their practice.	NA	NA	Professional socialisation is a concept that can be used practice area to influence behaviours, attitudes and values relating to the provision of compassionate, safe and high quality care.



Kelly et al (2017)	The paper discusses the value of a nursing history museum experience for pre-registration nursing students in aiding development of critical nursing identity.	2nd year adult nursing students	Group discussions	The study showed that the identity of contemporary intending nurses was constructed as being keen to combine the best elements offered by both institutions to develop skills to benefit the people they care for rather than being concerned with cultivating institutional or organisational loyalties.
Sabatino et al (2015)	Explored the perceptions of 3rd year undergraduate nursing students in relation to the perceptions that promoted or diminished the development of professional identity and the professional respect in themselves, and in nursing during their clinical training.	70 nursing students	Focus group interviews	The paper highlights a cultural approach and the health professionals role modelling. It also sheds light on the organisation of the clinical learning environment.
Leong & Crossman (2015)	This study explore the perceptions of new nurses in Singapore of their experiences of role transition and to examine the implications for managers in terms of employee training, development and retention.	26 novice nurses; 5 preceptors	Semi-structured interviews and reflective journal entries	The following five themes were discussed: creating and sustaining a collective learning environment; challenging constructively; collective support; the role of feedback; and effectiveness of Action Learning Sets
Miledler et al (2014)	This study looks at the impact of poor role modelling on medical students' professional and personal development on the basis of a singular incident at an associated teaching hospital.	Two students	Interviews	Key themes highlighted in the paper are: 1. Creating a sense of belonging. 2. Responsiveness to student learning needs. 3. Influence of professional identity development. 4. Learning what cannot be facilitated elsewhere.
Padraig (2015)	This study aims to explore and understand how nursing students learn in the clinical environment.	5 final year nursing students	Case study approach	The paper focused on the learner and the aspects that influence student learning experience: in the clinical environment, students learn what cannot be facilitated elsewhere. The remaining three themes relate to the influence of registered nurses on the student learning experience: responsiveness to student learning needs, creating a sense of belonging and influencing professional identity development.
Paliadelis & Wood (2016)	This paper reports on the learning potential of a reflective activity in which they were asked to recount two meaningful events that occurred during their clinical placements over the duration of their 3-year nursing degree program and reflect on how these events contributed to their learning to become	92 year 3 nursing students	Narratives retrieved from an online forum.	The paper discussed the following: 1. Recognising the impact of experience, 2. Understanding workplace complexity, 3. Confirming career choices, and 4. Transitioning to registered nurse practice.

	beginning level Registered Nurses.			
Sandvik et al (2014)	To elucidate the meaning and deepen the understanding of student learning and development in becoming a nurse.	24 students	Focus group interviews	It was found that a caring relationship was the foundation for learning and development. Three other factors highlighted were the will and motivation for learning and development, pushing boundaries through challenge and support and the synthesis of theory and praxis through reflection.
Sommer et al (2018)	The paper seeks to explore how the use of stories in supervision may contribute to self reflection in masters level counselling interns.	19 participants	Facilitated discussions	It was found that supervised dialogue on stories with universal themes helped to promote self reflection.
Veltri (2015)	This study is a naturalistic inquiry to understand the experiences of staff nurses in an obstetrical unit with undergraduate nursing students present for clinical learning.	12 staff nurses	Semi structured interviews	It was concluded that nurse educators can use classroom and simulation experiences to prepare undergraduate nursing students with theoretical knowledge, cognitive, psychomotor, affective, safety, and communication skills prior to clinical placement.
Zapatka et al (2014)	This paper captures the experiences of the initial cohort of post-master's adult nurse practitioner interprofessional fellowship.	7 nurse practitioners	Semi structured interviews	The study found the following: 1. The importance of bridging into professional practice (student to autonomous clinician), 2. expanded appreciation of health professionals' roles (trained in silos), 3. Commitment to interprofessional teamwork, and 4. Benefit of mentorship (lack of mentorship).