



EXAMINING THE MICROPOLITICAL LITERACY OF SCIENCE INTERN TEACHERS IN TAIWAN

Abstract. Micropolitical learning constitutes an essential part of the professional development of prospective science teachers. Drawing on interviews, this study applied categories of professional interests as a framework for investigating Taiwanese secondary science intern teachers' experiences of the micropolitical realities in schools and the meanings that the science interns construct for micropolitical experiences. The professional interests consist of material, organizational, social-professional, cultural-ideological, and self-interests (Kelchtermans & Ballet, 2002a). This study identified the career development interests of science interns beyond the five pre-defined subcategories. To cope with their vulnerability due to the lack of positional authority and role ambiguity in the practicum sites, the pursuit of social-professional interests was the most important. Proactively fitting into the prearranged school environments was the most prevalent micropolitical strategy for the interns because of their lack of professional autonomy and their supervisors' expectations. However, the efforts of a small number of science interns in challenging the school practices were noteworthy.

Key words: micropolitical literacy, professional interests, science intern teachers, Taiwan.

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Introduction

The professional development of teachers plays a key role in determining their commitment to teaching as a profession (Rots, Aelterman, Vlerick, & Vermeulen, 2007). Professional development results from the interactions between individual teachers and their professional environments where issues of power, influence, and control are pervasive (Kelchtermans & Ballet, 2002a) and members often strive to achieve personal goals (Ball, 1987). Some researchers have suggested that, in addition to learning the knowledge and skills of teaching, learning how to address the micropolitical aspects of their work lives constitutes an essential part of the professional development of prospective teachers (Curry, Jaxon, Rusell, Calahan, & Bicais, 2008; Kelchtermans & Ballet, 2002b). This political learning process is viewed as the development of micropolitical literacy (Kelchtermans & Ballet, 2002a). Micropolitical literacy, which refers to an individual's ability to understand and navigate issues of power and interests within organizations, starts at the very beginning of her/his professional career and significantly influences her/his subsequent career stages. This literacy is inherent and reflects the positive capacity of a teacher's commitment to the profession (Blase, 1991a).

The micropolitical literacy of intern teachers deserves explicit attention because micropolitics is especially relevant to the internship field experience, which plays a pivotal role in the professional development of prospective teachers (Russell & Russell, 2011). Most young intern teachers without political acumen tend to be overly simplistic and optimistic about the professional socialization process such that moving from university courses to the field of practice is difficult for them (Bauml, 2009). Specifically, although interns are only informal interim members of schools, they must adapt socially and negotiate their place within the existing school environment (Kelchtermans & Ballet, 2002b). Multiple roles and ambiguous positions pose considerable challenges to interns.

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Although they are not certified teachers, they must demonstrate the ability to effectively teach and guide students; although they are not administrators, they must be involved in administrative affairs. Unreasonable conditions in internship fields, such as inattentive mentors and administrators, inappropriate assignments, and negative school cultures, also make micropolitical socialization an essential component of internships (Gu, 2012).

Despite the importance of micropolitical socialization for intern teachers, knowledge of this issue remains limited, while there has been substantial research performed on micropolitical literacy among veteran and beginning teachers. Research has indicated that, in order to achieve their goals within schools, American teachers tend to employ protective methods in order to avoid conflicts with administrators, colleagues, students, and parents (Ball, 1987; Blase, 1991b). Research conducted with American and Flemish beginning teachers has shown that achieving self-interests by seeking recognition as functioning teachers from significant school members was the most important step for new teachers, and they did not involve themselves in the school culture negotiation process in order to secure future employment (Kelchtermans & Ballet, 2002a, 2002b; Schempp, Sparkes, & Templin, 1993). However, the predominance of American or European samples may reduce the applicability of these findings to teachers in other cultures. The roles and positions of interns are fundamentally different from those of both experienced and beginning teachers who are formally recognized as staff members (Kelchtermans & Ballet, 2002b).

In addition, science knowledge continues to increase drastically, and thus, science education should be continuously improved. Excellent science intern teachers with professional development are the important factors facilitating the revolution of science education (Yürük, 2011). However, recent studies have focused on the technical dimension of professional development among science intern teachers rather than the political dimension (e.g., Osman & Vebrantio, 2013).

In the present study, science intern teachers are referred to as the preservice teachers who teach natural science and applied science in the final practicum semesters of their teacher education programs. Therefore, the research questions of this study are as follows:

1. How are science intern teachers in secondary schools confronted with the micropolitical realities of schools during their internships?
2. What meanings do science intern teachers in secondary schools construct from these micropolitical experiences?

Theoretical Framework and Teacher Education Programs in Taiwan

Micropolitical Literacy

The micropolitical perspective is used as the conceptual lens in this study to examine how intern teachers in schools experience their professional socialization. Micropolitics refers to the use of formal and informal power by individuals and groups to protect, achieve, and advance their goals within organizations (Hoyle, 1986). Because the behaviors of organizational members result from their different interests, all of the conflicting, cooperative, collegial, and democratic actions and processes for furthering valued goals within an organization are part of micropolitics (Blase, 1991a, 1997).

Although a small number of studies have explored teachers' micropolitical experiences, most of them have focused on teachers' political actions without employing concrete and comprehensive analytical frameworks through which teachers' interests, behaviors, and beliefs can be well understood. Thus, this study adopted the concept of micropolitical literacy from Kelchtermans and Ballet (2002a, 2002b), who defined it as the competence to politically understand, navigate, and experience the complex landscape of roles, power, and interests in order to achieve their goals within schools.

Based on the idea that individuals' actions and beliefs are significantly determined by their interests, Kelchtermans and Ballet (2002a, 2002b, 2007) have suggested that teachers' micropolitical literacy should be examined according to these categories of professional interests: material, organizational, social-professional, cultural-ideological, and self-interest (see Table 1). These interests are the working conditions that teachers perceive as desirable and necessary to properly and effectively perform their professional duties. Individuals pursue their professional interests through their micropolitical literacy.



Table 1. Categories of professional interests.

Self-interests	Issues concerning professional identity and social recognition
Material interests	Availability and access to teaching materials, funds, specific infrastructure, and structural time facilities
Organizational interests	Issues on roles, positions, and/or formal tasks within the school
Cultural-ideological interests	Norms, values, and ideals recognized as legitimate and binding elements of the school culture
Social-professional interests	Issues of the character and quality of interpersonal relationships among school members

Kelchtermans (2005) argue that these five professional interest categories can be used to comprehensively understand, identify, and analyse different aspects of the complicated micropolitical phenomena in schools and in teachers' professional socialization processes. Although these categories are distinguished for conceptual and analytical reasons, professional interests are closely interrelated, and their roles are enacted simultaneously (Curry, Jaxon, Rusell, Callahan, & Bicais, 2008; Kelchtermans, 2007).

Teacher Education Programs in Taiwan

The participants in this study were the preservice science teachers of secondary schools in Taiwan. In Taiwan, secondary teacher education (STE) programs are offered by the STE centers at universities, which provide a standardized curriculum established by the Ministry of Education (MOE). After passing the entrance exams administered by the STE centers, undergraduates (except freshmen) and graduate students are granted entrance to the STE programs. In addition to discipline-focused degrees, students of STE programs must complete 26 credits in STE university courses and satisfy subject matter competence requirements. Subsequently, students must complete a six-month practicum in an assigned secondary school (MOE, 2006).

During the internship, STE students are full-time interns and receive no pay from their schools. University supervisors and mentor teachers in the schools are assigned to support the interns. During their internships, the interns return to their universities once per month to meet with their supervisors. According to the regulations, interns are required to be in actual classrooms in order to practice and learn instructional and classroom management techniques and knowledge. Furthermore, they must observe and learn school administrative functioning, which is usually devalued in university courses (MOE, 2011). The successful completion of the internship is based on the intern having met the applicable standards, as evaluated by the intern's university supervisor and the administrator and mentor at the assigned school. Upon successful completion of the practicum, the intern must pass the national professional examination before becoming certificated as a qualified secondary teacher by the MOE (MOE, 2012). Therefore, preparing for the certification exam is one of interns' greatest concerns during their internships (Gu, 2012).

Methodology of Research

This study focuses on science intern teachers' experiences of the micropolitical realities in practicum schools and the meanings that the science interns construct from their micropolitical experiences. Therefore, the data collection method implied that science interns were asked to recall and narratively reconstruct their career experiences (Cole & Knowles, 2001; Kelchtermans & Ballet, 2002b).

Participants

In this study, a purposeful sampling method (Patton, 1990) was used to select twenty-one intern teachers who taught natural science and applied science in secondary schools in Taiwan. The participants had completed their internships in January 2011 and were scheduled to take the teacher certification

exam in March 2011. They were educated at the teacher education centers at four different universities and completed internships in four different secondary schools (see Table 2). The science interns were invited to participate through their university supervisors and school mentors because they (1) were considered typical science interns who were smoothly completing their internships and (2) had expressed plans to begin teaching after receiving their teaching certificates.

Table 2. Participants.

Code	Gender Age	Education	Major	Graduate university	Practicum school
A	Male 23	Master	Physics		
B	Female 23	Bachelor	Chemistry	University I *National technological university	School I *Private vocational high school
C	Female 24	Bachelor	Biology	*Recruiting 24 STE students every year	*Approximately 8000 students and 300 teachers
D	Male 25	Master	Engineering		
E	Female 23	Bachelor	Electronics		
F	Female 23	Bachelor	Physics		
G	Male 24	Bachelor	Electronics	University II *Private technological university	School II *National vocational high school
H	Female 23	Bachelor	Agricultural engineering	*Recruiting 50 STE students every year	*Approximately 5000 students and 230 teachers
I	Male 23	Bachelor	Electrical engineering		
J	Female 23	Bachelor	Wildlife protection		
K	Male 24	Bachelor	Biology		
L	Female 27	Master	Chemistry	University III *Private comprehensive university	School III *Municipal comprehensive high school
M	Female 24	Bachelor	Chemistry	*Recruiting 55 STE students every year	*Approximately 3500 students and 135 teachers
N	Female 24	Bachelor	Earth Science		
O	Male 25	Bachelor	Physics		
P	Male 24	Bachelor	Earth Science		
Q	Female 28	Master	Earth Science	University IV *National comprehensive university	School IV *National comprehensive high school
R	Male 24	Bachelor	Chemistry	*Recruiting 23 STE students every year	*Approximately 4000 students and 150 teachers
S	Male 25	Bachelor	Chemistry		
T	Female 23	Bachelor	Biology		
U	Male 30	Master	Physics		

Data Collection and Analysis

Data were collected through life history interviews, which provided the science interns with ample opportunities to recall their experiences in the micropolitical environments of their internship fields (Cole & Knowles, 2001). The participants were encouraged to reflect upon their internship experiences and to narratively share their experiences and constructed meanings with respect to the micropolitical realities during the internship. All of the participants were interviewed twice in their native language, Chinese. The first interviews lasted between two and three hours, and the second interviews, which collected data that were missing from the first interviews, lasted thirty minutes to one hour. All interviews were audio-recorded and subsequently transcribed.

Employing Kelchtermans and Ballet's (2002a, 2002b) categories of professional interests in micropolitical literacy as the analytical framework, the interview transcripts were analyzed using within- and cross-case analyses (Patton, 1990). First, the researchers separately read and coded each participant's interviews as a single case. Then, the researchers compared and discussed the coding of transcripts and generated emerging categories and properties. Second, the cross-case analysis was conducted by



using a constant comparative analysis to search for or validate patterns emerging from the within-case analysis and to identify common patterns across cases.

To guarantee the trustworthiness of the research analysis, the process of member checking (Denzin & Lincoln, 2000) was used. During each phase of the analysis, the researchers first worked independently and then collaboratively to refine the individual analyses and interpretations until the consensus was achieved.

Examples of the findings are presented through quotes from the interviews. The subject's code name (A through U) and the interview date (mmddyyyy) are indicated in parentheses after each quote.

Results of Research

Social-Professional Interests

The micropolitics of the internships quickly informed the science interns that their professional survival hinged upon building positive interpersonal relationships in the field. Thus, the participants particularly emphasized that good interpersonal relationships in the schools constituted valuable sources of positive daily emotions, material resources, and social recognition. They recognized that establishing positive relationships with school members who held power and influence could even benefit their future teaching careers. As one female earth science intern explained:

The school principals and teachers may be on the school staff committees who recruit new teachers, or they could introduce interns to teaching vacancies in other schools. (N05032011)

Treating mentors with respect and trust. The relationships between the interns and their respective mentors were essential for all of the participants because the teaching practicum was a key part of the internship program, and the mentors were among those who evaluated the interns' performances. Most of the science interns viewed their mentors as professional teachers and tried to establish good relationships with them by treating them with respect and trust and sharing their workload. In particular, one male chemistry intern teacher expressed:

The interns had to observe the mentors' relationships with other school members and then avoided interacting with those whom their mentors did not like because doing so may destroy the intern-mentor relationship (R05212011).

Complying with administrators' expectations. An administrative practicum is part of the internship program. The science interns all understood the importance of maintaining good relationships with school administrators because they "controlled the availability of teaching materials and substitute teaching and were responsible for evaluating the interns' performance" (C004112011). "The most important aspect was that the school administrators enjoyed speaking ill of others, especially interns" (E04072011). However, administrative tasks, such as copying, typing, cleaning, and collecting documents, which were so trivial and time-consuming, were different from the interns' imaginations. Despite being reminded of previous experiences by senior students, most of them felt frustrated and disappointed.

Although the literature (Maynard, 2000) suggests that open communication can facilitate successful internship experiences, most science interns assumed that the administrators would be offended by frank discussions about their feelings. Most of the science interns adjusted their beliefs and silently complied with the administrators' expectations. As a result, the science interns tended to establish rather superficial relationships with the administrators through "gossiping with them to establish that sense of fellowship" (H07032011) and "actively assisting in administrative affairs to make themselves visible as loyal and committed interns" (L04262011).

Being part of a group of interns. Passing the national teacher certification exam is the prerequisite to becoming a qualified teacher in Taiwan. Most of the science interns at a given school organized an informal study group to share information about preparing for the certification exam and to provide emotional support. As one male biology intern noted:

Participating in a community that maintained positive relationships with peers might benefit not only our (the interns') internships but also our future career development. (K04242011)

Self-Interests

Almost all of the science interns strongly emphasized the importance of professional self-identity as the basis of their professional socialization in the internship process because their individual professional self-identities were central to their beliefs and practices and guided their actions within and outside of the schools (Sutherland, Howard, & Markauskaite, 2010). Most of them clearly identified themselves as "prospective teachers who possess educational knowledge but must develop practical professionalism" (F04252011). This identification reflects that, although the science interns seemed satisfied with their theoretical abilities, they were not confident in their practical competence as teachers. From the participants' stories, three issues related to self-interests were identified as follows.

Searching for social recognition. Because they had no formal positions in the schools, most of the participants tried their best to gain recognition from significant school members for their professional performances and commitment, which the interns identified as the source of their positive self-confidence and self-esteem as prospective teachers. This reflects that professional identity is a matter of acquiring and re-acquiring an identity that is socially legitimate (Sutherland, Howard, & Markauskaite, 2010). The science interns knew that positive social recognition would not simply "fall from the sky," so they had to make an effort to ensure that their performances were visible and acknowledged. Most of them were proactively involved in classroom management tasks, such as working with students to solve problems and assisting mentors in teaching, in an attempt to garner their mentors' appreciation and to demonstrate their professional competence.

Being respected as a teacher by the students was essential for some interns to feel valued in their working conditions. "Adolescents, who knew that the interns lacked formal authority in the classroom, tended to challenge interns' commands" (Q06112011). Thus, instead of being a "soft" senior, the science interns played the role of a "real" teacher by incorporating professional teaching strategies and firm management philosophies according to the authority that their mentor teachers ascribed to them. Furthermore, in addition to their assigned work, a few science interns assisted in extra administrative affairs in order to gain administrators' acknowledgement of their commitment to their work.

Tolerating the status quo and compensating for negative experiences. Most of the science interns stated that, with respect to the administrative practicum, they were treated as "unpaid, flexible, and disposable administrative assistants and were assigned trivial administrative tasks" (D04112011). A small number of the science interns felt that they were regarded as teaching assistants by their mentors. These experiences made them feel humiliated and depreciated as professionals. Initially, the interns often experienced a strong need to safeguard their professional self-esteem. However, their university supervisors persuaded these interns to tolerate the status quo because "they (the supervisors) felt that these negative situations were part of the real school context and that, when faced with such obstacles, the interns had to develop tolerance to such high levels of frustration" (O05142011).

The science interns who experienced these negative feelings gradually learned that the school members' lack of respect for them as interns may be the result of the interns' lack of formal authority and professional autonomy. Additionally, the interns felt that the risks associated with confronting the unreasonable treatment did not outweigh the potential gains of improved working conditions. Therefore, these science interns continuously persuaded themselves to tolerate the unreasonable status quo in order to complete the internship successfully. As one male physics intern noted:

To smoothly complete the internship, I usually tried to force myself to silently endure negative situations and to be proactively involved in the tasks as demanded by the school authorities because the internship indeed was a necessary stage in obtaining professional teacher certification. (U06142011)

In addition to unwillingly having to compromise with the reality of their situations, the science



interns in these environments attempted to find pleasant aspects of their situations in order to compensate for the negative experiences. For example, one male physics intern who was treated as a personal assistant by his mentor focused on preparing for the graduate school exam. The intern stated:

Passing the exam made me feel more fulfilled and helped to compensate for the damage to my self-esteem as a result of my negative experiences as an intern. (O06152011)

Coping with the uncertainty of a future career in teaching. In Taiwan, universities have recently prepared many more secondary science teachers, even exceeding the demand for teachers. As a result, there are many qualified science teachers without jobs. This macro-social context threatened the interns' future prospects of achieving teaching careers. Confronted with the saturated teaching market, most of the science interns often reconsidered whether the decision to pursue secondary teaching as a profession was correct, particularly when they were under pressure to prepare for the teacher certification exam or when they were compared to their peers who had already entered the labor market. Obtaining positive feedback from significant school members regarding the interns' professional performance as prospective teachers contributed to successfully coping with their uncertainty of a future career in teaching. Additionally, most science interns forced themselves to "focus on completing the internship and obtaining teacher certification rather than focusing on how to occupy the teaching vacancies" (S05282011).

These findings suggest that, in addition to the schools' internal factors, the macro-contextual elements influence an individual's micropolitical experience within school organizations (Blase, 1991a).

Material Interests: Sacrificing the Opportunity to Enhance Teaching Professionalism

Because of their lack of teaching experience, all of the science interns needed time to observe the teaching of mentors and to carefully plan lessons, both of which would enhance their teaching professionalism. Although the MOE established that the administration practicum should be 20% of the internship program, the science interns stated that, in fact, this part of the practicum occupied much more time than the teaching practicum (50%). Some of the administrative leaders even told the interns that "the affairs of the administrative offices were a top priority in the internship" (G04232011). As a result, the interns had little time to plan lessons or observe the teaching practices of their mentors. Most science interns questioned "why the interns had to spend so much time assisting with administrative tasks while the schools' formal teachers were allowed to focus on teaching" (T05222011). However, most of the interns believed that, according to their seniors' experiences and their supervisors' implications, "schools usually expected that the interns would devote a considerable amount of their time to such administrative tasks; thus, they were not supposed to argue or challenge the expectation" (I06112011).

Therefore, the science interns silently and reluctantly accepted the overtime administrative tasks, and some of them even participated in additional tasks in order to maintain good relationships with their administrators. The fact that most interns would rather sacrifice their opportunities to enhance their teaching professionalism in order to avoid negative evaluations by their administrators obviously reflects their vulnerability. Unexpectedly, during the final stage of the internship, some of the interns were rewarded with more personal time and more opportunities to substitute teach because of the positive relationships they had developed with the administrators and their commitment to assisting with administrative affairs.

Compared with most of the science interns who simply complied with practices, two science interns in this study attempted to alter the established time allocation. One of them stated firmly, "Such time allocation is unfair for interns. Developing teaching professionalism is the most essential part of the internship...To achieve my goal, I had to propose a change with regards to time allocation, although I was afraid of causing a conflict or receiving a negative evaluation" (B04062011). The other intern who also expressed concern stated, "If you never try to take action, how do you know it is possible to change the status quo? " (M05302011). At first, the two interns complied with the administrators' demands in exchange for social recognition of their commitment. Afterwards, they proactively negotiated their

preferred schedules with the administrators. Their strategy did result in more personal time. The two science interns felt proud of their political actions and learned that, "even though interns have no formal authority, they can still achieve their goals based on their prior commitment" (B05162011).

Cultural-Ideological Interests: Avoiding Taking a Stance in the School Culture

Compared to the other categories of professional interests, cultural-ideological concerns were less critical for the science interns. The cultural-ideological interests of most interns emerged when they found gaps between the school culture and their own task perceptions as prospective teachers. Almost all of the science interns avoided taking a stance in the pervasive school culture and tended to adapt to the school values. When they experienced an atmosphere of selfishness and conflict among teachers and a climate of suspicion and gossip among administrators, most of the interns were initially shocked and then warned themselves not to act in the same ways. As one female wildlife protection intern assumed:

Because our essential goal was to complete our internships smoothly at the practicum site, we were simply passers-by in the schools. Thus, we ought not to or were not able to become involved in school culture negotiations. (J04202011)

Only one of the participants was involved in processes of cultural negotiations at a school where life was strictly organized and managed by the rules. This intern said, "When I was teaching, one administrator was suddenly coming into the classroom to loudly blame my class for their noise" (A04042011). The norms of this school, which were opposite to his perceptions of secondary teaching, not only disappointed him but also damaged his professional self-esteem as a proactive teacher. However, based on his educational beliefs, this intern attempted to establish his preferred working conditions. He seriously reflected on the ways that young students should be taught and discussed physics lesson plans with his mentor. With his mentor's recognition of his teaching commitment and competence, the intern taught in slightly different ways that were more student-centered but that remained quiet. Although there was no effect on the dominant school culture, the mentor noticed positive feedback from the students, and the intern felt satisfied with his transformative efforts and gained self-confidence in his professionalism. The intern stated, "As a science intern, I didn't intend to change the school culture. I just anticipated doing something appropriate for the youth within the limitations" (A07012011). This case shows that the cultural-ideological interests and self-interests of the intern played simultaneous roles and interacted with each other.

Organizational Interests: Seeking the Opportunity to Substitute Teaching

Organizational interests often appeared to weigh more heavily in the science interns' decisions than other interests due to their vulnerability, which resulted from their lack of formal position or authority at the practicum sites. In this study, having the opportunity to substitute teach for absent teachers was an essential organizational interest for most science interns. Substitute teaching meant that the intern could replace an absent teacher for a period ranging from a single class to days or weeks. Allowing an intern to supplant a certified teacher during the teacher's absence provided the intern with a great opportunity to gain teaching experience. Additionally, "in the schools, substitute teachers were usually more powerful and were given more respect than interns" (E04172011). Thus, the science interns' desire to replace absent teachers represented a search for respect and power as much as for a semi-formal position within the school. Furthermore, as a substitute teacher, interns received income that somewhat offset their unpaid internship. Therefore, the interns viewed substitute teaching as an important interest.

Most of the science interns developed positive relationships with administrators by voluntarily participating in extra administrative duties in exchange for the opportunity to substitute teach. Substitute teaching, in turn, facilitated their visibility as competent prospective teachers to the principals and some teachers who had powerful voices in hiring decisions. This could help science interns secure

a future job after they completed their practicum and received their teacher certification.

Thus, all these findings revealed that the social-professional interests of science interns supported them in striving for their organizational interest of serving as substitute teachers, on the basis of which the self-interest of being recognized as competent prospective teachers was reached.

Discussion

This study represents an important extension of previous research (e.g., Kelchtermans & Ballet, 2002a; Blase, 1991b) on Western beginning and experienced teachers because it highlights the complex and precarious micropolitical socialization of secondary science intern teachers during their internships.

Emerging Career Development Interests

The findings from the science interns' stories suggest that, beyond the five subcategories of interests identified by Kelchtermans and Ballet (2002a; 2002b), there were certain higher-order professional interests, including smoothly completing the internship and obtaining a future teaching career. These concerns could be classified as "career development interests" because they involved individuals' career development within and outside of the school environment. This higher-order category of professional interests, which was particularly related to the internship, extensively influenced the micropolitical thoughts and actions of the interns. The science interns were in an essential stage of beginning to explore their occupational careers, and the processes and results of their development in this stage would significantly determine their subsequent career development. Thus, career development interests were critically important for the science interns during their internships.

Social-Professional Interests as the Most Desirable Working Condition

The findings indicate that the pursuit of social-professional interests was the most important concern for the science interns. This result supports the findings by Putnam and Borko (2000), which indicated that interpersonal interactions are the major determinant of what and how interns learn during their internships. However, this finding is inconsistent with some studies that suggest that the primary focus of beginning teachers is self-interest (Kelchtermans & Ballet, 2002a, 2002b; Schempp, et al., 1993). One possible explanation for this difference may be the different roles, powers, and positions within schools between interns and beginning teachers. Beginning teachers who are accredited professionals are formal school staff in concrete positions. Interns are a special school population who are interim members involved only in certain school affairs without formal teacher certification; as such, they lack formal authority. The hierarchy of power in the school was clear to all science interns. Principals and administrators held the greatest power, followed by teachers, and then students. Some of the science interns complained that "our status was even fixed below that of the students" (P05082011). To cope with this vulnerability and low self-confidence due to the lack of positional authority and role ambiguity in the practicum sites, the science interns may establish positive relationships with significant school members to safeguard their basic positions within the imbalanced power structure of the practicum sites (Brown, 2009).

The finding that the Taiwanese secondary science interns in this study valued their relationships with administrators and intern peers, in addition to the relationships with their mentors, is inconsistent with some studies (Bradbury & Koballa, 2008; Russel & Russel, 2011) that have indicated that interns in Western societies tend to orient themselves toward their mentors. In addition to different practicum systems, one possible explanation for this difference may be in the differing cultural values between Taiwanese and Western people. The Taiwanese culture emphasizes the importance of social networks, rather than the development of professional competence, as the foundation of a successful career, especially in unfamiliar working environments, whereas Western people do not place relatively high value on social capital in the workplace (Chen, 2009). This impact of the macro-culture echoes Blase's

(1991a) micropolitical view of the macro-factors of organizations interacting with members' micropolitical actions.

Indeed, social relationships with school members were essential for the science interns because unsuccessful relationships may create barriers for the interns, resulting in missed developmental opportunities or, even worse, entirely preventing interns from successfully entering the teaching profession (Bradbury & Koballa, 2008).

*Fitting into the Prearranged Institutional World of School Environments as the
Prevalent Micropolitical Strategy*

The findings indicate that, despite different practicum contexts, the prevalent micropolitical strategy employed by the science interns in this study for pursuing their interests was protectively fitting into the prearranged school environments. One major reason may be the vulnerability of the science interns in the imbalanced power structure of schools. The science interns had no positional authority, and their internship performance was evaluated by mentors and administrators. Additionally, the conservative attitudes of the university supervisors may have contributed to the interns' proactive micropolitical literacy. Most of the university supervisors in this study tended to ask the interns to comply with school expectations even if those expectations contradicted common educational beliefs. This result may also be explained by the traditional Taiwanese culture, which emphasizes that experienced professionals and seniors should be respected and that their commands should be obeyed by novices and juniors (Chen, 2009). Because science interns are considered juniors or novices in schools, they must submit to their mentors and the administrators in the schools.

In fact, university supervisors play a significant role in developing the resilience required of interns and in producing the desired effects on their socialization (Gold, 1996). Therefore, university supervisors should be aware of their significance in the professional socialization of their interns as well as their function as role models and a source of support for the development of active and progressive micropolitical literacy in their interns.

Noteworthy Efforts to Challenge Established Practices

It is noteworthy that only a small number of science interns attempted to challenge the established practices of their schools in order to achieve their interests. Although it is not necessary to romanticize their reflective and active actions, it is important not to overemphasize the science interns' inability to effect change (Goodman, 1988). Although the school cultures did not change significantly, the science interns' efforts to challenge practices were valuable because these interns had just begun to explore their chosen profession, and substantial revolutions in schools can and do result from such challenges.

Conclusions and Implications

This study applied five categories of professional interests as a framework for investigating the experiences and meanings that Taiwanese secondary science intern teachers construct from the micropolitical realities of schools. Beyond the five pre-defined subcategories, the study identified interns' career development interests in completing smoothly their internships and achieving future teaching careers, which extensively influenced their micropolitical literacy. The findings indicate that, in order to cope with their vulnerability and low self-confidence due to the lack of positional authority and role ambiguity in their practicum sites, the pursuit of social-professional interests was the most important concern for the science interns. To achieve their interests, the science interns tended to proactively fit into the pre-organized school environments because of their lack of professional autonomy and their supervisors' conservative expectations. However, the efforts of a small number of science interns in challenging the school practices were noteworthy.

The organizational structure and culture were the explicit and implicit outcomes of and resources for individuals' actions; they enabled and restricted actions but never fully determined them (Jurasaitė-



Harbison & Rex, 2010). Thus, interns must be aware of and partially responsible for the current internship culture at practicum sites. To facilitate the professional socialization of interns and to shape appropriate internship cultures in ever-changing political climates, teacher preparation programs must empower preservice teachers by increasing their micropolitical literacy and forging their identities as agents of change. Specifically, teacher preparation programs must address the political realities of internships, such as the vulnerability of the interns, their professional interests, and dealing with school traditions and expectations, as well as micropolitical knowledge and strategies for addressing individual systems. All of these concepts may be integrated into the teacher education curriculum by requiring interns to observe and reflect on the school teaching and administration practices through a variety of assignments. Interns could also be encouraged not to simply adapt to the status quo but to reflect critically, interrogate, and challenge the internship structures that constrain their professional development by seeking advice and guidance from university instructors who offer support and serve as proactive role models.

Furthermore, interns could be encouraged to make good use of their peer community as a gateway to micropolitical development. In fact, an intern community can enhance the micropolitical literacy of the interns and empower them through collaborative site-based discussions and examinations of micropolitical issues within a safe peer environment. The solidarity and support of an intern community can also mitigate the feelings of vulnerability and isolation that are traditionally related to internships (Curry, Jaxon, Rusell, Callahan, & Bicais, 2008).

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