



## ACCELERATED PROFESSIONAL IDENTITY DEVELOPMENT THROUGH SOCIAL NETWORK SITES

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### ABSTRACT

Aim/Purpose	This study aims to uncover how Social Network Sites (SNSs) active users who are eager to be knowledgeable about a specific domain develop a professional identity, what practices they use, and how do SNSs afford professional identity development.
Background	Some researchers have shown that SNSs play a central role in personal development, but there is a lack of studies tracing the actual role of SNSs affordances in professional identity development.
Methodology	Seven participants were followed during a whole year; we examined their professional identity development based on data collected from interviews, cued retrospective reports, and online activities.
Contribution	The study shows that SNSs create a new context for professional identity development, a context whose new characteristics bring specific actors to a spectacular development in their professional identity. Based on the findings we suggest a new framework of professional identity development with SNSs.
Findings	We identified a wide range of activities and changes in the perceived professional identity. We found that there are four phases of SNS's professional identity development. The study also uncovers the three aspects of identity development: self-presentation, around-the-clock sociality, and interaction with information. The model of professional development through intensive use of SNSs is validated by our reports on the actual behaviors afforded by SNSs.

Accepted by Editor Nicole A. Buzzetto-Hollywood | Received: May 23, 2020 | Revised: July 13, 2020 | Accepted: August 2, 2020.

Cite as: Hardof-Jaffe, S., Schwarz, B., & Flum, H. (2020). Accelerated professional identity development through social network sites. *Interdisciplinary Journal of e-Skills and Lifelong Learning*, 16, 65-92.  
<https://doi.org/10.28945/4614>

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Recommendations for Practitioners	The conceptual framework displayed in the article can help educational institutions to implement SNSs in order to enhance professional identity development. Guidance will allow students to handle self-presentation, sociality, and information management. By doing so, the guides will help achieving meaningful SNS activities and encouraging students to be involved in their fields of interest, thereby enhancing their professional identity.
Future Research	Future studies may examine the implementation of SNSs for the exploration process leading to identity development in various educational institutions. A few years longitudinal study may examine the lifelong professional identity development in varied SNSs. Moreover, in the COVID-19 world crisis when life is in digital spaces more than ever, it will be interesting to study the role of SNSs of professional identity development in the population that lost their jobs.
Keywords	professional identity development, SNSs affordances, digital information organization

## INTRODUCTION

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Social Network Sites (SNSs) are no longer just digital platforms that merely facilitate connections between people. SNSs are part of the everyday environment and, as such, are artifacts that many people fully use in their daily lives. SNS users create or find information on a wide range of subjects and contexts, which they share and discuss with other users. Hence, SNSs have become environments that may be crucial for various aspects of the SNS users' development (Barker & Rodriguez, 2019; Heidaria et al., 2020; Manago, 2014; Novakovich et al., 2017). The incessant interactions with others that SNSs provide may change the rules of the developmental game, in the same way as other tools that gave new opportunities to interact with others impinged on culture and development in the past (Rogoff, 1990). As non-formal informational spaces, SNSs may summon learning and support collaborative processes. However, considering them as learning spaces is a controversial statement: SNSs were not designed for triggering learning, and many of the activities in SNSs are not oriented to learning. Still, many people use SNSs to seek information and discuss it with other people, and, as such, SNSs are non-formal Computer-Supported Collaborative Learning (CSCL) environments (Forkosh-Baruch & Hershkovitz, 2013, 2019; Manca, 2020; Wise & Schwarz, 2107). And indeed, we will see that SNSs have affordances and constraints for learning and development. In this paper, we consider contexts in which SNSs enable developmental processes, identify the affordances SNSs provide for triggering these processes, and what practices SNS users enact when they develop.

Our use of the term "Social Network Sites" is based on Boyd and Ellison's (2007) definition as "web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system." The nature of these connections may vary from site to site. And SNS users share and retrieve their emotions, private life events, learning and academic materials, and professional information. It is commonplace that SNSs have become public information spaces in which information on almost any subject or field of interest can be found, presented, and discussed. Such public information spaces are often created by individuals who share not only information, but also their life events and personal information in their profiles, thereby making the boundaries between the personal information space and the public information space unclear (Brandtzaeg & Chaparro-Domínguez, 2020; Chayko, 2019; Cheek & Øby, 2019; Kasperuniene & Zydziunaite, 2019; Manaca & Ranieri 2017). Such a blurring of spaces turns personal information management actions – keeping, organizing, and retrieving – into a social activity. The information SNS users hold becomes an act of self-presentation, and today our digital information is a part of us (Floridi, 2014, p. 98). Recent studies have examined SNS affordances for the organization of information and found that SNSs set new challenges for the organization of information. The organization of personal information in SNSs depends on the types of relationships that

one has with other users – friends, followers, or users who share fields of interest (Bouadjenek et al., 2016; Hajibayova; 2019); users are notified about new information and seek for information according to their friends and their friends' interests. Furthermore, they choose what information to share knowing who are their friends (their audience) and what are their fields of interest. In addition to activities of organization of information, in her review of adolescence identity development in the digital age, Manago (2014) claimed that SNSs impact on identity development: SNSs facilitate broadcasting of self-representation to wide audiences and afford customized sociality, meaning that SNSs enable to build social circles that meet the user needs. Hence, adolescent SNS users can search for social circles and communities that meet their needs, and gain from high levels of interaction and feedback from other users. The present study focuses on how adults who have a subject of interest capitalize on SNSs to find, keep, organize, and share personal information in order to develop their professional identity through the intensive use of SNSs for acquiring, organizing and sharing information.

The developmental direction appears to be feasible, since SNS progressive self-presentation and interaction among peers, through the handling of information, are observable, and research on the development of the self focuses on whether and how one processes information. For example, exploration, which characterizes its highest manifestations, is defined as “a deliberate internal or external action of seeking and processing information in relation to the self” (Flum & Kaplan, 2006). Flum and Kaplan (2006) assert that the outcome of the exploration process is the development of self-relevant meaning, which facilitates identity development. The identity has a role in the way people perceive their abilities to deal with content in a self-regulated learning (Kaplan et al., 2019). Although they did not refer to the use of SNSs for identity development, according to Flum and Kaplan (2006) theoretical analysis, SNSs seem to be appropriate tools for the facilitation of development of an exploratory orientation. Manago (2014), in her literature review on adolescence identity development aspects in SNSs, suggests that SNSs play a central role in adolescents' identity development through two main characteristics – public self-expression and customized sociality. Both have their pros and cons for identity development. Here analysis focuses on youth and the reviewed studies did not trace development processes among adult users. Starcic et al. (2017) also found in young students' attitudes survey (21-25 years old) that they believe that SNSs change professional and career practices and, therefore, help to shape professional identities. However, this latter study also focuses on young people who “believe that SNS shape identities”; it does not trace processes of identity formation. The field of adults' professional identity development in SNSs is relatively unexplored: empirical longitudinal studies are missing.

This study aims at uncovering the role of sharing and organizing knowledge in SNSs on adult's professional identity development in a non-formal learning context. In addition, it traces the development impact, motivations, characteristics, phases, challenges, and the SNSs affordances to professional identity development.

The present study is based on data collected over a year from various sources: interviews, cued retrospective reports, and online activities. It focuses on professional identity development— a particular case of identity development. It is an ongoing process whereby a person develops over the course of one's life, which concerns one's self-perception through social interaction (Erikson, 1968). Professional identity is based on attributes, beliefs, values, motives, experiences, and achievements which are related to groups of peers in the professional field (Beijaard et al., 2004; Gee, 2000). This study describes seven adult users who organized and shared information in a specific field of interest. We trace their identity development trajectory and offer a conceptual framework for professional development through SNSs.

## **LITERATURE REVIEW**

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The literature review refers to many studies on SNSs, of which some are empirical studies, and many propose reasonable conjectures for rigorous research. The literature on SNS affordances is important

for our study, although it is often conjectural. We first review the affordances and constraints provided by SNSs, then review research on professional identity development, when SNSs are cultural artifacts of the professionals.

### ***SNS AFFORDANCES***

SNSs were initially created for social interaction purposes – to connect, interact, and share information with people in a digital social sphere. In a study of the use of SNSs in organizations, Treem and Leonardi (2013) suggested that SNSs afford visibility, persistence, editability, and association. Visibility is the ability to make the user information behaviors visible to others. Visibility affordances facilitate the sharing and saving of information: information which includes behaviors, knowledge, preferences, and networks. The visibility of SNSs also affords meta-knowledge and allows SNS users to understand information about topics and peers with an accumulation of information collections. Persistence is the possibility that the information can remain and that users can go back to information that was uploaded or shared in SNS platforms. It remains available for future use and does not disappear. The knowledge is maintained over time, and the content grows all the time. Editability is the possibility given to users to edit and change content; users can endlessly modify the materials they create. The association affordance means that SNSs make it possible to establish connections between individuals. In a study based on daily online diaries, Zhao and colleagues (2013) found that SNSs afford self-information archiving, creating, managing, and curating content, and become meaningful memories repositories.

SNS affordances have added new dimensions to the concept of personal information; they summon new activities and facilitate a new component of organization – the relationships with other users as friends, members, and followers. SNSs change the roles in personal information management and make them highly reliant on the social dimension. The fact that personal information storage/archives are becoming public, or at least visible to other users, changes the basic definition and goals of personal information. The digital information items of one's SNSs, *walls* and *profiles* become an archive of valuable information items, an archive for one's life events, social circles, and fields of interest. They represent one and one's identity (Cheek & Øby, 2019; Cushing, 2013; Floridi, 2014; Zhao et al., 2013).

SNSs also afford new ways of social conversations and peers discussions. SNSs enable the creation of groups, the uploading of information, and feedback provision (through icon and texts). Therefore, SNSs can summon discussions about information, and, consequently, some educators have found SNSs to be a potential platform that enables learning processes that can be used as a personal learning environment (PLE), which are the single student's digital system, a place where the student interacts, creates, and shares information with other students or teachers (Dabbagh & Kitsantas, 2012; Jin et al., 2015; Manca 2020; Van Harmelen, 2006). The ease of sharing and the appealing discussion features have brought creative teachers to implement SNSs in their teaching. Previous studies reveal how innovative teachers have found a variety of ways to use SNSs and that SNSs can enhance social learning, autonomy, and active engagement in their classrooms (Greenhow & Askari, 2017; Lampe et al., 2011; Schwarz & Caduri, 2016).

SNSs are interesting environments for enhancing teacher-student interaction: Forkosh-Baruch & Hershkovitz (2013, 2018, 2019) examined teachers' perceptions of teacher-student relationships in SNSs and found that teachers are often connected with students as 'friends' in SNS, and most of them would like to be connected to students on SNSs. SNSs afford teachers' higher responsivity and care for their students, beyond school boundaries (Manca, 2020; Wallace et al., 2016).

Some studies have checked the conjectures about the alleged affordances of SNSs. For example, a series of studies found that academics and schoolteachers use SNS for sharing experiences, knowledge, practices, political issues, and professional events (Greenhow et al., 2019; Ranieri et al., 2012; Robson, 2018; Rutherford, 2013). Carpenter and Krutka (2015), examined how teachers use

Twitter and showed that Twitter affords contextual demands, helps meeting specific pedagogical and emotional needs, enables the creation of new connections, and by such enables a new conception of professional identity. Robson (2018) examined teachers' professional identity in digital context through interviews and traces of their activities in forums, Facebook pages, and groups. He discerned active users and passive users. The active teachers use the online social space for presenting themselves. The passive teachers engage in reading and learning from the information active users shared. Robson (2018) showed that both (active and passive participation) enable professional identity development in two different ways. Rutherford (2013) explored teacher's professional development through interaction in SNSs and the informal opportunities for teachers to engage in professional development. The study examined posts over a year in a teachers' Facebook group and shows that teachers are using the group for discussions and engagement as informal professional development environment. These studies describe SNSs potential and constraints for teacher professional development through close examination of the teacher's activity, and they focused on teacher professional development – the profession which is already part of their identity. Our study emphasizes the self-identity development of SNSs users' through their interaction with information organization in SNSs, and the emergence, then changes in their professional identity. Like Robson (2018), we use a holistic view of personal and professional identity as two unseparated parts of one's identity. However, our study aims to understand the users' interactions with information and to find how SNSs afford processes of development.

Furthermore, it was conjectured that the information collected in digital spaces affords lifelogging as a new way of learning, and new tools for self-management and self-monitoring by using quantified self-application and automatic statistical analysis, which are meant to enhance awareness and reflection. However, much advancement is required in order to fulfill their potential for learning and development (Arnold et al., 2017; Buongiorno, 2017; Kristensen & Ruckenstein, 2018). The present study capitalizes on the literature on the affordances of SNSs but checks empirically the realization of the potential of the above affordances. We examined how users learn and develop a field of interest, while organizing and sharing information, with others in informal learning contexts, and what role SNSs profiles, friends, and information sharing play in their professional identity development. An important step in our approach was to delve into the literature on the other side of the coin – on the constraints SNSs provide to users.

### ***SNS CONSTRAINTS***

SNS platforms, with their current features of information organization (the 'save' feature in Facebook, 'boards' in Pinterest, 'channels' and 'playlist' in YouTube, 'hashtags', etc.) do not only afford desirable actions but also pose some challenges: it is hard to keep information. It is also hard to manage information. For example, it is difficult to save a post in the list of 'saved' on Facebook as a primary organization component for information or to share it with oneself by sending it by email. It is challenging to retrieve old information from previous posts in SNSs, and, finally, the sharing activity – which is one of the leading components in any SNS platform – is overdone. True, users use sharing options to share with others on a daily basis and for saving, retrieving, and organizing information for future personal use. However, people who share information have difficulties in controlling the sharing preferences, particularly the preferences of who can see my shared information and for how long (Tolmie & Crabtree, 2018). As a result, SNS users suffer from information overload. These facts question the potential of SNSs for professional development.

Manago (2014) also highlighted the costs of SNSs for identity development. She pointed at the absence of SNSs sociality, which is reflected in shallow relationships, seeking acceptance in large networks, and promoting the desirable self which might not be the real one. Her review also reveals the deficiencies of SNSs as the self-expression is not authentic and indicators of identity markers are many times based on a list of contacts (list of 'friends' or 'followers') and therefore the individual self-identity highly depends on others verification. Robson (2018) also showed in his findings how

online professional self-presentation summon presentation of idealized identity' and how carefully the professionals choose the contents and resources they share.

Another SNS constraint is the difficulty to maintain boundaries between work and one's private life. SNSs merging public and private identities (Kasperuniene & Zydziunaite, 2019). It was found that users want more control over their perceived sociability and morality; therefore, some employees prefer to separate professional and private contacts (Van Prooijen et al., 2018). The boundaries also challenge the transformation from youth into adulthood and professional identity construction. Brandtzaeg and Chaparro-Domínguez (2020) found in qualitative in-depth interviews with young journalists that they struggle to develop effective ways to manage previous identity expression in their present professional identity; moreover, some felt that they were trapped in their own SNS history. Kimmons and Veletsianos (2014), who examined educators' identities on SNSs, also found that teachers demonstrate the problematic side of identity development through SNSs. They shaped their participation in SNSs to be "acceptable" to their audiences and felt that their self-expression represented small fragmented parts of their complete identity. The study of the educators' identity sheds light on the tensions teachers experience, which is related to personal and professional identity in SNSs. Another problematic issue was raised in an academic context, where previous studies show that students share information very extensively in SNSs for educational purposes; nevertheless, the use of shared information for reading is low, and there is a lack of meaningful conversation about the shared information content (Bar-Tal & Asterhan, 2017).

These findings raise questions about the value of SNS affordances for professional identity development. In this study, we take an in-depth look at how active SNS users, who organize and share information in a specific field of interest, cope with SNSs constraints. We trace how they learn and develop in SNSs, and what makes SNSs a platform for a unique process of professional identity development.

### ***PROFESSIONAL IDENTITY DEVELOPMENT AND SNSs***

Identity development is an ongoing process of interpretation of the self in a variety of contexts, and it answers the questions 'who am I', 'what am I' and 'what peer group do I belong to' (Erikson, 1968). The self is developed through interactions with the environment, social settings, and social communication, which adopts the role of 'others' (other people) to monitor our actions (Mead, 1934). It is constructed dynamically in a continual process of organization of motivations, abilities, beliefs, and the individual's historical events. Identity development leads to a higher awareness of one's own personal uniqueness, similarity to others, strengths, and weaknesses (Marcia, 1966). Identity development involves the motivation to acquire information and engagement, and it is based on the innate curiosity, which translates into an active search for information, examination, and evaluation of the information in a self-reflective manner, in an ongoing process of exploration (Flum & Kaplan, 2006). Grotevant (1987), suggested a process model of a life-span perspective on identity formation. The model includes four components: individual characteristics – the unique abilities and orientations; identity formation – a process in a specific domain; contexts of development – society, family, peers, work, school; and interdependencies among the identity domains – which represent the connections between the identities that individuals have in different domains.

Manago (2014) reviewed how SNSs impact on the identity development of young adults and adolescents in the digital age. Her review highlights two main characteristics: customized sociality and public self-expression. Customized sociality is SNS's ability to support the individual's pursuit of social resources, which meet his or her needs. SNSs enable a heightened level of exploration; a large network of peers increased expectations of creating an image of the self that is appropriately packaged for an audience. Customized sociality provides a window into the lives of peers who are outside the immediate social circle; it might enable a sense of belonging to more similar peers, in particular for minorities that might have difficulties in finding similar peers in the real-life reality. Self-expression

on SNSs also differs from self-expression before SNSs appeared in our lives. Expression by one individual meets one's large number of contacts, a contact list which is usually anchored in offline relationships. SNS's public expressions enable one to validate, shape, and express self. It also allows seeing other individuals' selves, and it might sharpen the awareness of our self-image, and when we have multiple groups, we may find ourselves maintaining multiple identities in SNSs (Manago, 2014).

One of the identities is the professional identity. Professional identity is one's professional self-concept; it relies on attributes, beliefs, values, motives, and experiences. Professional identity, like personal identity, develops over time with a variety of experiences and meaningful feedback, which allows people to gain insight into their professional talents and values. Professional identity is more adaptable and can develop through the work environment. Ibarra (1999) distinguishes between image or persona and professional identity. Persona refers to the impressions people believe they convey to others. She claims that people adapt to professional roles by experimenting with images or persona that have not yet developed fully into their professional identities, which she refers to as "provisional selves". The role of these provisional selves is to bridge the gap between one's role and one's self-conception.

In the last few years, studies start examining SNSs as tools for career development. A previous survey study (Starcic et al., 2017) found that 21-25 years old students believe that a SNS supports professional identity development and career control, impacts on professional identification, provides professional networking, creates a sense of belonging to a professional community, helps in making career decisions, and impacts on work exploration, self-presentation and learning for self-development. A qualitative action research (Novakovich et al., 2017), which focused on students' competencies to use SNSs as tools, found that SNSs enable networking and self-presentation for the students' career development. In a systematic literature review on professional identity construction through social media, Kasperuniene & Zydziunaite (2019) found that social media are characterized by blurring of occupational stereotypes and reconstruction of multiple professional selves, merging public and private identities, and enabling belonging. Bridgstock (2019) explored LinkedIn's potential for career development, especially the connectedness capabilities and the broader employability. He suggested those potentialities can enable the emergence of new learning activities in higher education that promote students' skills of career development. These studies lack a developmental depth, though. Previous studies suggest providing institutional guidance for students regarding the use of social networking sites and forming their digital professional identity in SNSs (Jackson & Bridgstock, 2020; Jawed et al., 2019; Starcic et al., 2017). There is a lack of studies tracing the actual role of SNSs affordances in professional identity development: How do adults, in their lifelong professional development, use SNSs? What can we learn from them for others?

## RESEARCH QUESTIONS

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We investigated three main questions: (1) How adults, who use extensively SNSs, develop their professional identity? (2) What are the components of identity development of these users, and (3) How do SNSs afford professional identity development?

## METHOD

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In the present study, we adopted a qualitative phenomenological mode of inquiry, in which we set a longitudinal design, in order to observe information organization and development as perceived by the participants. The phenomenological approach enables to understand phenomena in their context, particularly when the phenomenon and its context are vague (Creswell, 1998). This study focuses on structures, themes, and changes to uncover participants' insights and meanings of the investigated phenomenon and to examine shared SNSs activities, along with participants' narrated experiences and their interpretation. Participants were followed during a whole year. The setting enabled us to identify practices of information organization through SNSs. Through the lenses of these practices, we investigated how participants developed their specific interest. We identified implications of the

activities that the participants undertook with SNSs for their lives as professionals, through questions focusing on their experiences and the meanings they ascribed to them (Seidman, 2006). Furthermore, the mode of inquiry allowed us to trace and understand the developmental dynamics, changes in motivation and actions over time. Interviews and reports as well as screen records and online data collection were used. This combination of tools facilitated the understanding of the computer-mediated discourse structure, meaning, and interactions of the participants (Herring, 2004), and helped identifying actual SNS affordances as they appeared in the user interactions with the environment in varied events (Gibson, 2000).

### ***PARTICIPANTS***

Seven active SNS users participated in the study. Table 1 shows the profile of each participant. All participants acquired and shared information in their fields of interest through SNSs. The age span of the seven SNS users was very broad: from 19 to 53 years old. We included this wide range of ages in order to have varied perspectives on the use of SNSs to organize and share information in a chosen subject. The selection of the participants relied on two criteria. We chose SNS users who (1) are active daily in a specific domain and engage in information organization, and (2) use more than one SNS in this domain (see Table 2). The participants were recruited via personal and professional connections. First, we asked active online users to recommend users who are active SNS users in one or two main subject areas. Then we approached them and checked with them that they are daily users of SNSs and use more than one SNS platform. All seven participants were interviewed, and 6 of them recorded their own actions on SNSs and then watched the records with the interviewer they retrospectively reported their activities.

**Table 1. Profile and data collected for each of the seven participants**

<b>Participant</b>	<b>Age</b>	<b>Fields of Interest</b>	<b>Retrospective Report Events</b>
Yael	19	Art, poetry slam	3 (15-30 min)
Shira	38	Teacher, technology-pedagogy, PhD student	8 (5-20 min)
Michal	50	Family economics	3 (15-20 min)
Barak	53	Urban agriculture	3 (10-43 min)
Adi	36	Poetry	6 (5-8 min)
Or	50	Arts and crafts	2 (5-60+ min)
Gilad	49	Marketing and SNS trends - lifestyle groups	0

**Table 2. SNS use for each of the seven participants**

<b>Participant</b>	<b>Number of SNSs</b>	<b>Everyday use</b>	<b>More SNSs</b>
Yael	7	Facebook, Instagram, Pinterest	Etsy, YouTube, Tumblr, snapchat
Shira	5	Facebook, Instagram, Pinterest	Forums, YouTube
Michal	4	Facebook, blog, Pinterest	Instagram
Barak	5	Pinterest, Facebook	YouTube, blog, Instagram
Adi	3	Facebook, Instagram, blog	
Or	4	Pinterest, Facebook, Etsy	Instagram
Gilad	3	Facebook, Instagram,	Pinterest



## ***PROCEDURE AND RESEARCH TOOLS***

Data was collected at different points of time, along the year-long activities of the professionals. The departure point consisted of an in-depth interview that lasted two to four hours. Interviews were conducted with the participants while their personal computers were at their disposal. All interviews included three stages. The first part of the interview focused on the participants' background on their use of social networks for their subject of interest, as well as on the ways they became involved in that field of interest. In the second part of the interview, users described their current activities in SNSs. Participants were asked to describe and show their work on various SNSs. They were asked how they perceived the role of SNS activities and what they mean for them. At the end of the second stage, participants were asked to record three events of their future SNS activities for at least five minutes each, at different times. Table 1 show the recording numbers and duration. The first and second stages of the interview occurred in the same session.

The last session took place later – after the retrospective records reports. They reported on their on-going activities and were requested to add new information about what occurred since the last meeting. Then, they presented the recorded events and gave explanatory comments on them (Seidman, 2006). These sessions lasted from 90 minutes to 4 hours. The reports revealed the participant's strategies and practices. They also revealed the SNS affordances as well as the challenges the participants faced, and the ways they deal with them.

### **Collection of data**

The research questions necessitated observing how participants used SNSs. In particular, we aimed at whether the affordances of the SNSs yielded desirable behaviors. The affordances of an environment are a net of facilitators and abilities for humans' interaction (Gaver, 1991; Gibson, 2000). Affordances of SNSs are ways their users understand and use them, without being given any explanation (Jones, 2003). Therefore, in order to check whether affordances led to specific behaviors, we focused on events of interaction: The participants used the Flashback application and recorded three to five events at different times. The recorded events lasted from 5 minutes to 43 (only one event lasted more than 60) minutes: they included navigation in various SNS, sharing activities, and interactions with others. The first author invited participants to give cued retrospective reports – reports that enable participants to re-examine their actions and goals by watching records of past activities (Van Gog et al., 2009). During the year, six out of the seven participants took part in such meetings and reported retrospectively about their chosen activity events, as they were presented the actual recorded SNS activity events.

In addition to the cued retrospectives, the participants' public posts and comments on SNS were collected at least once a week from the first meeting throughout a year. The data collection was completed by email communication to clarify specific issues that came up. The in-depth interviews, cued retrospective reports, participants' posts on SNS, and follow-up clarifications were recorded and transcribed.

### **Analysis of data**

The analysis of data was done in two main ways. The longitudinal analysis consisted in a description of each participant's organization of activities over time. The second analysis was a categorial analysis aimed at unearthing development components, and identifying SNSs' affordances, users' strategies, and practices involved in professional identity development in SNSs.

### **Longitudinal analysis**

The longitudinal analysis was aimed at tracing professional development through stories, actions (identified in the cued retrospectives and online data – which included the participants' SNSs posts), and self-perceptions. This longitudinal analysis was done at an individual level and across individuals.

At each level, three points in time were considered: ‘the beginning’ as narrated retrospectively in the first meeting, ‘the present point’ at the time of the in-depth interview, and the follow-up information collection from SNS activities as we found in the content of the online data collection - public SNSs posts on SNS walls up to the end of the year.

### **Categorial analysis**

We classified all data collected in interviews, retrospective records, and online into categories and subcategories. All texts were segmented into units and analyzed with the Atlas application. The preliminary categories that we created to answer the three research questions were based on two main theoretical frameworks: Manago’s (2014) identity development in SNS, and Flum and Kaplan (2006) Exploratory orientation as a process of development for education in the 21st century (Flum & Kaplan, 2006, 2012). The preliminary categories were Customized sociality, Public and Self-expression (Manago, 2014), and Engagement, Motivations, Acquiring knowledge, Awareness and reflection (Flum & Kaplan, 2006). Data were analyzed three times, in order to create the new set of categories. Initially, each unit was conferred one or more category from the preliminary categories (based on literature), and some were left out or were conferred a new optional category. In a second analysis, new categories were combined with the originals and separated according to the revealed new aspects which arose from the full data. At the third phase, units were analyzed again into the categories which were redefined into new categories in order to convey the distinctive activities that characterize the work of experts’ development as they continuously (re-)organize information and interact with other users of SNSs in their trade.

### **Ethical issues**

The institutional ethics board authorized data collection. In addition, each participant agreed with the data collection at each stage. One participant did not want to participate in the retrospective reports, and one participant did not approve the public post and comments collection. Although the participants’ public SNSs walls and comments included other users posts and comments, such data were not included in the data collection. All findings of peers’ interactions relied on the transcripts of the participants’ interviews and retrospective reports.

## **FINDINGS**

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The findings part includes three sections. The first section presents the accelerated identity development as perceived by the participants, the four phases of professional development as identified in SNS platforms, and the participants’ motivations. The second part presents the three components that characterize this unique kind of professional identity development: extended self-presentation, around-the-clock sociality, and intensive interaction with information. The third section defines SNSs affordances for each component, shows the tensions between affordances and constraints, and describes the participants’ practices.

### ***HOW SNS USERS DEVELOP A PROFESSIONAL IDENTITY PERCEIVED ACCELERATED IDENTITY DEVELOPMENT – FROM AMATEURSHIP TO EXPERTISE***

We identified a wide range of activities and changes in the perceived professional identity. The development of each participant is ‘a different story’. However, a common feature of these stories was that the participant observed it as a fast process.

#### **Fast process**

Or said: “It was fast... I realized I could not trace my feedbacks” (O:F:50), (Participants id code [Letter of first name, gender, age]), which would be for example Or, Female, 50 years old.). Yael implied

that sometimes it was too fast: “It serves my learning, but it runs fast” (Y:F:19). Michal expressed a big change, as she said in the interview: “If you told me four years ago that I would write a blog I would tell you: you are nuts” (M:F:49); “It happened so fast” (G:M:48). Adi, in her first interview, showed the new Facebook page that she opened for poetry. A few weeks later, in the retrospective report, she had already organized her first evening of poetry reading. Another example of her progress was illustrated by the change she made in the contents she shared. In the first interview, she said she avoided interpretation of the poems, as she didn’t feel that she could present herself as one who understands poetry. She said, “I do not dare to write my interpretation [of the poem she shared],” and “I prefer not to share a poem on my private wall because it says something about me and my feelings at a specific point in time”. However, after one month, she wrote an interpretation on her wall of a group of poems she gathered for a reading evening. And today she does it from time to time. In the follow-up of her Facebook activity we found that she closed her poetry page, and she explained that she hired a legal advisor, and that ‘she understands the legal copyright issues’. She decided to publish the poems from her personal profile which requires as she said “more awareness of personal exposure” (A:F:36). We can identify in this example the rise of professional awareness in her development. She found a way to bridge the gap between the personal and the professional in a situation where what she considered as a hobby starts to represent the self, her knowledge, and self-perception, and this change leads her to say that she understands about poetry - “To come and say: I know”. Adi (F:36) still has her main profession (career development) but her activity in poetry is prominent in her life, and she organizes a poetry reading evening with a different theme every month.

### **Significant changes**

A second theme in the stories of the participants was they experienced a significant change. Yael (19), in the second meeting with her for the cued retrospective report, declared that she had made significant changes since her last meeting (six months earlier). She was proud to say: “I just opened my artist page...” (Y:F:19). By contrast, in her first interview, she did not call herself an artist even though she discussed her work. In her first interview, it was clear that SNS activities were representing her and she was also aware of the challenges “I do not share personal information... I want to choose when and how I disclose...”. However, now her page has become part of her identity, and she is now an artist, and this is the way she presents herself to the world and to her SNS peers in different social circles. The longitudinal analysis suggests an enormous development in her self-perception within a short period of time. She not only presents her work; she presents it as the ‘work of an artist.’

This phenomenon repeats itself for the other participants: SNS iterated activities change and promote the way in which these users progressively perceive themselves as professionals, how they perceive their impact in the field, and how their activities become meaningful for their peers. The evaluations of the peers, through the feedback they receive, is of crucial importance in this development. Or (F:50) said that one day while she was reading the feedback of one of her peers, she realized her impact: “I understood that I am a kind of inspiration to people” (O:F:50). Adi (F:36) said that presenting information in SNSs means “To come and say: I know”, to come and say: “I am an expert...” (G:M:48), or “people perceive me as an expert” (M:F:49).

### **From hobby to profession**

A third theme in the stories of the participants is that they perceived that they were amateurs and that they became professionals. Gilad (M:48) brought a different story of a professional change in his life which started from a leisure activity. He began a lifestyle group one year before we met him for the interview. In the interview, he said “It started one afternoon on my balcony; a few friends were looking to do something interesting... one year later it has become a monster with 7,000 members...”, “I have about 7,000 members, and 2,000 of them are active in our activities (trips, parties, small events). His Facebook activities a few months later involves 9,905 members, a new Instagram account for the

group and a wider range of activities (workshops and courses). Moreover, he shares wide media exposure on the group he established: an article in a popular newspaper on Gilad and the group he has built as well as a 10-minute item on TV (all shared with the Facebook group). Now he understands that he must manage the group carefully. In one of his posts, he wrote to the group members: “Many people want to join the group and I have to select the active ones.” He has also published rules and regulations that he formulated with a lawyer. Moreover, a few months later, he published a post in which he declared that he does a lot of work for the group in order to manage it and to organize events, and he makes a profit from this. He told the members of the group that this is now his profession and that he lives from this hobby which has become a profession. We can also identify his growing awareness of his responsibilities as a professional because he declared to the group that he also takes care of the activities of participants in real-life events, which he initiated from SNS, and he takes care of the members’ complaints or that are related to the Facebook group interaction.

### ‘Ups and downs’

Another theme in the participants’ stories is that they experienced ups and downs in their development. Barak (M:53) also made changes over the short period of time during which we monitored his SNS activities. In the first interview, he presented himself as an expert; he said he made the development over the last few years. However, six months later, in a third follow-up meeting, he shared his ‘ups and downs’ in the profession through his SNS activities - “I put it aside [his field of interest], and you can see it in my profile, I did not have things to share. Still, I was on Facebook every day... I am now coming back. Now I have put it [his field of interest] in the center of my activity again, now I share more again” (B:M:53). Barak demonstrates that identity development is not a linear process. We met him in the first interview when he felt like an expert; however, life made him neglect his field for a while. It was interesting to discover that he perceives SNS activities as the platform for making his comeback.

The findings reveal that each participant analysis indicates a process where an eager interest or hobby becomes a dominant component of the individual’s identity and his/her profession. It seems that each participant was deeply engaged in his or her field of interest, and that, overall, SNS activities enhanced identity development.

### Identification of the phases of SNS’s professional identity development

The participants’ self-reports on what they perceived as their professional development is important. In parallel with this (subjective) perception, we adopted analytical approach to identify developmental processes in the participants’ posts and actions. We will show that we identified four phases: (1) the initial experience of the **development of interest**, told retrospectively in the interview; (2) the **recognition phase** - when others get interested in my interest; (3) the **validation and commitment phase** - when participants understand that I am validated as being an expert, and (4) **the maintenance phase**, which includes awareness and understanding of the process, the practices and how to manage them wisely.

The **development of interest** phase is characterized by the early identification and construction of an interest and the decision to start sharing interest related information on SNSs. The attraction to the field of interest was clear in all of the interviews: “I caught the bug in Vancouver ...” (B:M:53); “this is what I was looking for” (M:F:49), “I found myself doing that for hours at night” (O:F:50); “it began with regular searches in Google, and then it became much more...” (Y:F:19); “I always loved writing and telling stories” (A:F:36). It is also not surprising that it took some courage to start sharing: “It took me three to four posts to understand that I am O.K.” (M:F:49). Shira, the teacher, said that she “was looking for that [the development], I love technology... I am very connected...” (S:F:36). She also explains that, at the beginning, she did not use SNS for information about her field of interest, “at the beginning I used the Facebook solely for private purposes, only when I started

studying, did I find the SNSs to be a source for professional information sharing” (S:F:36). Or said: “It began as a hobby... only later I realized that this is my calling” (O:F:50).

In the **recognition** phase participants realize that other people are interested in the information they share. Moreover, they are even perceived as a person “who knows” (A:F:36), “a person who has a say...” (Y:F:19). As one that people are looking for because of the information that she shares “people are waiting for the poem” (A:F:36). This phase is characterized by the high motivation to keep going and to engage in “this ‘work’ consistently” (B:M:53).

The following phase is the **validation and commitment** phase - the ‘I am an expert’ phase. In this phase, the participants realize that people are not just following them, they do so because they perceive them to be experts. The ‘I am an expert’ phase is often marked with a ‘WOW’ feeling: “In a short time I realized... people see me as an authority in the field” (O:F:50). This phase is also characterized by a sense of responsibility and commitment to information sharing and audiences, “I know I have to share on a daily basis” (A:F:36), “I am committed to the information I publish” (O:F:50). “I have to share this information with others” (S:F:36).

In the next phase, the focus is on the **maintenance** of their newly developed commitments, accompanied by personal and practical insights about their professional meanings and implications. During this developmental phase three components come to the fore simultaneously: self-presentation actions, sociality interactions, and the construction of knowledge they share. Participants report a developing awareness of SNS challenges and potential, along with its affordances as a platform for their activities. They engage in adjustment of their activities and fine tunings of practices.

All these phases, with exploratory activities and experiences leading to a sense of commitment and committed behavior and hence the process as a whole, could be described as having formative impact on participants’ personal identity development, and more specifically on their professional identity (e.g. Kroger, 2015; Marcia, 1966, 1993).

### **Motivations for SNS professional identity development**

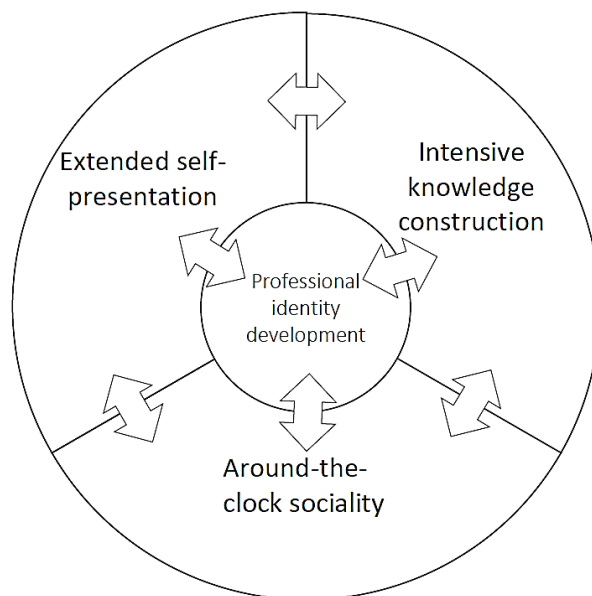
The emergence of the four phases of professional identity development could be discerned in different times. However, signs of previous phases continued to appear after latter phases began. In other words, phases were nested in each other. This is the case for the development of interest. It was initially vague and materialized through changes of motivation that expressed this development of interest. The initial eagerness to learn was similar for all of our participants. However, their motivations differed. Shira and Gilad were mostly characterized by what Kozinets (2015) calls ‘consociation’ or ‘consocial motivation’ – “a commonplace, largely instrumental, and often incidental form of association, one that we often take for granted because it has become so natural” (pp. 11). Indeed, Shira and Gilad share a lot, almost immediately, in wide circles, and don’t follow the responses unless they are looking for something. They use SNS as a channel, keep personal matters personal, and professional matters professional, and are not emotionally involved in their activities. They share in order to broaden their connections, use their knowledge of “...how the SNS works.” (G:M:48); “Something I think more people should know” (S:F:36), “I share immediately in the relevant group” (S:F:36). Barak and Michal are characterized by two main motivations – to learn more by themselves, they become autodidacts – and to self-brand their names as experts in their fields. “...to brand myself as an expert... a one-man show” (B:M:53). Or also found herself being motivated by branding her name, but her primary motivation was purely to learn, her motivation was an autodidact process of learning and engaging with interesting discoveries in the SNS. “I did it for myself... and suddenly it turned out that it is interesting for other users... I found that people are following me...” (O:F:50). Yael (F:19) and Adi (F:36) are motivated by their desire to learn as autodidact learners and the motivation to develop through confrontation and expression of who they are and what their fields of interest are. “Can you be a feminist and not a vegan?” (Y:F:19), “I felt that I am developing professionally... she came to me... it was meaningful for her...” (A:F:36). Table 3. Summarizes the motivations of each of the seven participants.

**Table 3. Change in participants' motivations**

Names	Field of Interest	Initial Motivation	Motivation after one year
Yael	Art, poetry slam	Deep interest Searching for development	To learn through confrontation with others To become an autodidact
Shira	Technology and education	Searching for development	Consocial
Michal	Family economics	Encounter meeting with new field	Self-branding
Barak	Urban agroecology	Life event deep interest	Self-branding To become an autodidact
Adi	Poetry	Deep interest Childhood hobby	To learn through confrontation with others Self-branding
Or	Arts and crafts	Life event childhood hobby	To become an autodidact
Gilad	Lifestyle	Life event Searching for development	Consocial

### *THREE COMPONENTS OF IDENTITY DEVELOPMENT IN SNS PLATFORMS*

We described the four phases of identity development, As just explained, these phases are nested in each other. The longitudinal analysis revealed another characteristic of professional identity development, the fact that this process involves three components in all its phases: self-presentation, around-the-clock sociality, and interaction with information. Figure 1 shows the three main components and the linkage between the components.

**Figure 1. Professional identity development in SNS**

## Extended self-presentation

Our participants were highly engaged in extended self-presentation using texts, pictures, videos, and sharing information in a variety of SNSs. All seven participants used SNS platforms on a daily basis – Facebook as the primary site, but Pinterest, Blogs and Instagram were also frequently mentioned for acquiring, presenting, and discussing information in their fields of interest. The extended self-presentation on SNSs arise from its three unique SNS characteristics: various forms of self-expression, high frequency of self-presentation, and self-broadcasting to wide audiences.

**Various forms of self-expression** – The forms of self-expression varied according to the SNSs they worked. The participants used five main platforms for their self-presentation: Pinterest, Facebook, Instagram, Blogs, and YouTube. For example: “I use three SNSs. The main one is Facebook. I also publish a little on Instagram and Facebook, and I share on Pinterest” (M:F:49). They use them in a variety of ways, and their self-presentation changes in each SNS, from building a different profile to sharing different content and interacting with different people: “Pinterest is for pictures... In Facebook, I have a professional page and a private page” (M:F:49); “This is represented in YouTube, and here there are the drafts (word copies)” (Y:F:19); “for me, Pinterest is for visual” (O:F:50); “Pinterest is for presenting my work” (B:M:53); “In Pinterest, I upload pictures of stuff I make from old wave boards” (G:M:48).

Self-presentation on SNSs is based on varied formats of information. The participants use images, videos, and texts to present information about themselves. Barak and Michal upload and share pictures of their work and workshops they have given. The SNS profile is naturally the main place for self-presentation: the urban agriculture participant posted a picture of a pool he made on his private profile, and on Adi’s poetry page, we find a picture of a whisky bottle and a pile of reading books. Gilad, with the lifestyle group, shows a picture of a beach in his private profile. Michal presents a picture in her private profile of her family and her professional “family economics consultant”. Adi posted a picture in her private profile of one of her favorite writers. The profiles can be changed, so these are just pictures that present the self over a certain period of time. The self-presentation in SNSs is very dynamic, and the participants frequently use SNS profiles and walls to change their self-presentation and the information they reveal to present themselves.

**High frequency of self-expression** and self-exposure were demonstrated by all participants: “Over the last two weeks I have uploaded a poem every day” (A:F:36). Moreover, it seems as if they like this part of SNS: “I love to talk or share’ I really love to share” (A:F:36). Barak reflected on the way the subject he talks about or shares represent him, and the dynamic change in the self-presentation: “I used to present political information, and today I prefer to present more information about my field, about worlds that are connected to me” (B:M:53). Barak raises the relationship between information “I present and myself”. He related the move, from political content to professional content, as a process of development, a change from general and private contents to professional. He changes his activities by asking the leading question: what does he want to be connected to, and how would he like to present himself.

As Adi said, “I have to admit there is value to the exposure...” and, by saying that, she raises an important motivation for self-exposure - “to be seen”. This exposure in SNSs is also characterized by the lack of control and the wide range of people who are watching. The self-presentation in SNSs is often more like Manago (2014) called it - Self-broadcasting. Our participants identified how they use SNSs for **self-broadcasting** to wide audiences. Moreover, what they say and the information they share are broadcast to unexpected audiences, and they are willing to receive comments and feedback from this broadcasted information and exposures of selves: “you just publicize yourself in the SNS, people can contact you from all around the world” (O:F:50); “this movie, I did not plan... it had a thousand views... for me, it was a lot...” (Y:F:19). The feeling of self-broadcasting in SNS, as raised in the interviews, is accompanied by self-presence – here I am!: “There is something about presenting stuff that makes you feel that people see you” (A:F:36). Moreover, in the professional context, it is used by Barak, Michal, Gilad, and Or for self-branding: “this is your self-visibility” (O:F:50); “This is

the group I built [he gave the name]... now it is a brand..." (G:M:48). As Barak said, it is all due to: "positioning yourself as an expert" (B:M:53).

The participants extended their presentation during the time they are involved in their field of interest. They were highly aware of the choices they made about how and what they present in their SNS profiles. As showed, they also talk about how the information they share represents them. The retrospective reports and the follow-up data collections (the second and third meetings) reveal the fast and dynamic characteristics of the development and the changes in the participants' perceptions of themselves. Moreover, the retrospective report demonstrated how they learn to enhance and control the way they use the various SNS features for self-presentation.

### **Around-the-clock sociality**

Our participants engage in SNS activities every day, "day and night" (O:F:50). They share information and interact with friends and followers: "I check notifications to follow and to answer..." (M:F:49); They frequently connect to their SNS profiles, walls and, in particular, to their notifications. Their peers are also there, "someone is always connected at any time" (S:F:36). They connect to the SNS platforms from their PCs, laptops, tablets and cell-phones. The interaction is often with people from far away, and most of them also have connections around the world. Some of the connections are with peers and people they never met before they interacted with them on SNSs. The analysis of our participants' sociality in SNSs, in the context of developing professional identities, is characterized by building compatible peer circles, giving and receiving meaningful feedback, experiencing social events in real life (which are initiated online), and ongoing peer comparisons.

**Compatible peer circles** - It was found that our participants built a customized social world (Manago, 2014) and created compatible peer circles – groups of peers in their field of interest, social peer circles with a mutual interest. Moreover, we found that our participants are also connected to people in the field, "here [on my wall] they found her artwork" (O:F:50); "I created the connection between them" (B:M:53). The social circles our participants create are dynamic, they grow with time and we can identify a process of ongoing customization of their sociality in SNSs: "now [as opposed to in the past], I have many artists here [Facebook friends]" (Y:F:19); "I stay only in groups which are good... I can write and comment there [in the group] without anyone attacking me..." (M:F:49). This dynamic process of sociality is part of their identity development, they become more specific and they are engaged with more specialists in the field, and over time their social circles gather more friends in their fields of interest.

**Meaningful feedback** - The social circles are crucial, and the participants revealed how they build them through the comments and feedback. In this way, their knowledge is evaluated, and their professionalism is recognized. The participants indicated that they get meaningful feedback from peers who are in the same field; moreover, we found that they also developed ways to summon these feedbacks: For example, Or published a post in which she asked: "...do you know of an interesting Hamsa collector?" (Retrieved from O:F:50 Facebook posts).

It is interesting to see the linkage created by participants between the customized peer circles and the meaningful feedback: "there is a dialog... people [in the professional circle] are waiting for this poem... it answers someone's needs" (A:F:36); "The comments show me that it is valuable to people,"; "her comment gave me a new idea" (M:F:49). Through these meaningful interactions the participants talk and build their compatible social circles.

**Social events in real life** - What was not anticipated was to find that the SNS's sociality goes beyond virtual interactions: "a few days ago, while walking, someone said to me – hi, you are Michal, I read your blog..." (M:F:49). These real-life events are based on professional and social meetings (e.g., dinners, workshops, tours). Six of our participants took part in social events in real life with peers who they first 'met' in SNSs: "we have a group of bloggers... we meet each other occasionally..."



(M:F:49). “I met her at her gallery...” (O:F:50); “This group from Facebook meets all the time in social events” (G:M:48).

**Peer comparisons** - The groups played an important role in identity development. They created a feeling of belonging, alongside a demarcation and comparison processes: “I know what comments I will get, and they will be very hostile, I have been able to position myself in the SNS as a person who has a say...” (Y:F:19). “We had a workshop together... it is interesting to see what she is doing now...” (B:M:53), “you see other people’s lives all the time and you compare yourself...” (A:F:36). It is interesting to see how from the intense sociality on SNS in a field of interest, emerges a professional community in which the amateurs can develop their unique professional identity as part of a process that includes peer comparisons. They understand and perfect their professional identity, during an ongoing estimation of how they belong and how similar they are to their peers and in what ways they are unique and in what ways they differ from them.

### **Interaction with information towards knowledge construction**

The interaction with information was found to be remarkable and we identified wide aspects of it: engagement, compatible knowledge exposure, creating and presenting knowledge, and the acquisition of information skills (searching, evaluating, categorizing, etc.). All seven participants were highly engaged in everyday interaction with information acquisition: reading, saving, retrieving, and sharing: “I learn a lot from reading other people’s stuff, I am exposed to many Blogs, from some of which I learn a lot...” (M:F:48). The cue retrospective reports revealed that participants have high levels of alertness of their SNS interaction with information, although it appeared from the records as if they were merely scrolling their feeds: “I scroll fast, but I can catch the important and relevant information” (S:F:36); “I learn something new on the network every day” (M:F:49), “I can see that I read many items seriously and evaluate them” (Y:F:19); “I scroll fast but when my eye picks up some interesting information, I stop to read it” (S:F:36). Moreover, it was found that they are involved in ongoing information collection activities, keeping information for themselves, sharing with peers, and creating an information archive in their field of interest: “It was a good article so I sent it to myself” (M:F:49); “If it is interesting I will save it or ‘like’ it” (Y:F:19).

The massive interaction with information is characterized by an eager interest for information in their fields: “I am a Google freak ... I have always loved technology, I am always connected, at first I build all kinds of learning and games” (S:F:36), “I love this song [she shared]” (A:F:36). All our participants were talking about their field of interest with enthusiasm, they are deeply engaged in their fields and in the information they acquire and share with their peers: “I learned this for myself... I said that this is exactly what I was looking for” (M:F:49); “I found myself acquiring things that I love day and night” (O:F:50).

Apart from the interaction with much information in the SNSs, it was also found that the information they share and use is also compatible with their needs and interests. Or (F:50) described how she filters contents to increase her exposure to information in her field: “I follow artists, so you can see art on my wall.” (O:F:53). Barak (M:53) said that he prefers some subjects over others and identified how, over the period, he moved from information sharing on one subject to more specific information in his field of interest. We can identify a process of information customization in which the participants interact and are exposed mostly to information that is relevant to them, “I use notifications to filter the information I want to see” (S:F:36). The information goes through a process of evaluation and organization, and then it is presented to peers “I share only good articles” (S:F:36), “I look for special things [crafts]” (O:F:53).

The participants jump between a few typical activities for knowledge construction: ongoing studying by free intuitive navigating (S:F:36; G:M:48; Y:F:19); in-depth curation activities of organizing and interpreting presented information (O:F:50; A:F:36); focusing on learning and developing while building a professional information archive (M:F:49; B:F:53); and exploratory interaction and sharing of information relating to their fields of interest, mixed with information relating to self (Y:F:19;

A:F:36; O:F:50). Table 4 demonstrates the different knowledge construction activities of each participant.

**Table 4. Knowledge construction activities of the participants**

	<b>Field of Interest</b>	<b>Knowledge construction activities</b>
Yael	Art, poetry slam	Exploratory creation and sharing information relating to self and to her fields of interest
Shira	Technology and education	Ongoing interaction with information by free intuitive navigation, and focusing on sharing
Michal	Family economics	Building a professional archive
Barak	Urban agroecology	Learning and developing professional expertise
Adi	Poetry	Creating knowledge Share information
Or	Arts and crafts	Curation and peer interaction
Gilad	Lifestyle	Ongoing interaction with information by free intuitive navigation, and focusing on <b>deliberate</b> sharing

To sum up, the participants acquired new knowledge with new professional peers; they present themselves, what they know, and what they have learned through SNSs.

### ***HOW SNSs AFFORD PROFESSIONAL IDENTITY DEVELOPMENT***

In the first part of this article, we reported on the affordances of SNSs. These affordances are potentialities for desirable behaviors, and often the affordances are only wishful intentions of designers, which do not lead to the behaviors envisioned. We report here on the actual behaviors afforded by SNSs that led to professional identity development, through their role in self-presentation, around-the-clock sociality, and interaction with knowledge. This section presents the role of SNSs affordances in the three main constructs that supported professional identity development as arises from the analysis of the participants' interviews, retrospective reports, and SNS activities.

The participants used SNS on a daily basis; the retrospective reports enabled us to look carefully on this interaction and to reveal what are the SNSs affordances for the accelerated professional identity development that we have found, and the participants' wide range of practices, which they acquired in order to enhance their extended professional identity development through SNS. The participants progressively enacted practices. The process of uncovering the practices was undertaken with the participants themselves, using the reports given by them, while watching their recorded activities in SNS.

#### ***Self-expression affordances***

It was found that SNSs enable wide ways of self-expressions, the participants use SNSs for self-broadcasting to broad audiences for many of their activities: "you can share everything with anyone" (O:F:50); "I have invited everyone to the event" (G:M:48). However, on the other side, we also found that SNSs enables very intimate peer interactions. It was shown that participants use SNS for private interactions: "people ask me in private" (O:F:50), "comments are sometimes personal" (O:F:50). In the retrospective records, they say, "I met her here" or "we are very close, we share many boards [on Pinterest]" (B:M:53). Moreover, we found that sometimes the participants tailored their self-presentation as Manago (2014) claimed, "I rearranged my profile" (Y:F:19). However, it

happened that they aimed at creating authentic self-presentation: “I write very personally, I give examples from my private life” (M:F:49) or “This is exactly who I am” (O:F:50). They moved between antagonistic affordances and chose how to present their self in wide range of affordances.

The main practices the participants used for self-expression are focused activity in the field of interest, enhanced privacy skills acquiring expertise in SNS, and enabling judgment on personal and professional presentation

### **Sociality affordances**

Unsurprisingly, the participants’ social interaction in SNS was very rich. We found that the participants belonged to permanent social circles, which included people they know: “Those who comment are part of a wide permanent group of people” (O:F:50). However, we found that SNSs also expose users to “friend” requests from unknown people. These requests are approved for various reasons, and therefore previously unknown people became ‘friends’. Moreover, SNSs enabled comments and interaction and afforded meaningful feedback, such as “I know I give people value, I know it from their comments” (M:F:49). Nevertheless, we found that the affordances of meaningful feedback was contradicted by the fact that the participants also indicated that they spend a lot of wasted time in social interactions with peers. Participants also reported on the burden that these interactions yielded; Or declared “I will answer all comments later in the evening” (O:F:50); in a retrospective report, she added “I have to answer all comments”; “I answer all comments. Moreover, it is a lot...” (O:F:50). These findings reveal that sociality affordances are also characterized by antagonism, and participants have to decide how to construct their social interaction through SNSs. The participants’ practices to enjoy the potential of sociality and to avoid the constrains are to reply to peer comments and feedback, enabling judgment on the diverse circles of audiences, and to follow peer activity in a variety of SNSs

### **Information interaction affordances**

The last group of affordances is the construction of knowledge/information. It appeared that for all participants, SNSs afford an everyday exposure to information; they afford easy public information sharing and flexible consumption: “Every day I share information I find in SNS” (S:F:36). Moreover, we found that participants use SNSs in order to keep information in personal spaces and to create personal information spaces for keeping previous activities and important information items. “All my work [objects he builds from previous surfing] is here [Pinterest board]” (G:M:48). SNSs also afford our participants exposure to information by subject, but also afford exposure to information by peers. The participants revealed that they follow peers to see what they share and what they are looking for with respect to knowledge and groups by subject. In addition, the participants point on varied of SNSs’ affordances for acquiring information. In the acquiring information we also identified the contradiction between affordances for intentional acquiring and unplanned information encounters: “in Pinterest I get my information from notifications, or I look for it by searching...” (B:M:53) “in Facebook I look for peers that share information in my field” (M:F:49). In order to construct knowledge from SNSs the participants apply a variety of practices for dealing with information: regularly create and share new information, acquiring knowledge from varied SNSs, organizing information from SNS sources for reuse (immediately or later in time by sending emails, using save options, or sharing in other SNSs like Pinterest boards), search information by people and by subject (this means using other peers or experts in order to find relevant information), and using notifications (to control the information overload).

To sum the findings about SNS affordances we would like to light some general insights of the participants. Some participants identified SNS constraints and dilemmas and the feel that they have to control their use; Yael said that she had just deleted the Facebook App from her cellphone and that she was trying to limit her use of Facebook, even though it is important and convenient to share and read from it (Y:F:19). Or and Adi also shared that they have to control their use of SNSs (Or felt that

she spends a lot of time in Pinterest, and Adi on Facebook). Barak said that he must give more attention and control of how he uses Facebook. The overall analysis of the retrospective reporting raises the suggestion that SNSs summon antagonistic affordances (shown in Table 5 in the Discussion section) and, therefore, create the need to be aware and to monitor activities.

Moreover, it was identified that the participants developed critical information skills, implanting them in the SNS context: they developed search skills for SNSs, and we can see that they look for information in SNSs in various techniques which are based on sociality filtering and tags, and not just by keywords. They have a variety of skills to control overload information, they are skilled at taking care of their privacy, and they have developed skills for promoting their information.

## DISCUSSION

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The present study shows that SNSs create a new context for professional identity development, a context whose new characteristics brings specific actors to a spectacular development in their professional identity. The participants in this study were carefully selected. We deliberately looked for SNS users who initially actively organized and shared information in their field of interest. Therefore, it is not surprising that we found that professional identity developed among these highly motivated participants. Nevertheless, considering the short period of time we were given, we were surprised by how spectacular was the development of their professional identity. The findings indicate that SNS users underwent abrupt changes in the way they perceive their own identity and in the ways their peers perceive them, as experts or as people of standing.

To begin with, the more expectable findings, from the time of Marcia (1966), it is well known that identity development in general involves commitment (Marcia, 1966). We observed that our participants were highly committed to the acquisition and sharing of knowledge. This was one of the prominent practices that we identified. Our participants intensively used Facebook, Instagram, YouTube and Blogs in their professional life, and this use led to the development of their professional identity. We agree with Bridgstock (2019), who stated that other platforms such as LinkedIn might also help developing professional identity, although the latter study was not based on long-term observation of professionals. We also believe that there is a teachable knowledge that can enhance students' identity development through SNSs as claimed by previous studies (Jackson & Bridgstock, 2020; Jawed et al., 2019; Starcic et al., 2017).

Another expectable finding echoes what Floridi (2014) already noticed: the study clearly demonstrated that SNS activities became part of the users' info-space and that their information became part of them and part of their identity. Floridi's concept about the Onlife identity in the digital age (as opposed to online or offline concepts) is salient in the SNSs of our participants (where their activities take place online and offline). For example, Adi arranged with her 'followers' and 'friends' on Facebook a meeting for a reading event in a bar, and Or organized a trip to galleries in Europe. Our study provides clear evidence that when SNSs are adopted as tools for professional development, their use extends online interactions and knowledge exchange into 'real life events' (such as face-to-face meetings and collaborations). These findings agree with Barker and Rodriguez (2019), who found that, among other reasons, students share selfies to say something about who they are.

The present study brings new insights about the role of SNSs in identity development. We showed, like Manago (2014), that SNSs afford the self-presentation and the social feedback for identity formation and, like Treem and Leonardi (2013), that SNSs afford information interaction, visibility, editability, and content creation. We confirmed that the unique mixture of self-presentation, social interaction, and the information accessibility provided by SNSs led to an accelerated development of professional identity. Our findings also correspond with Kasperuniene & Zydziunaite's (2019) review. We suggest framing the impact of SNSs on professional identity development in three main aspects: extended self-presentation, around-the-clock sociality, and intensive knowledge construction.

However, extended self-presentation, around-the-clock sociality, and intensive knowledge construction do not necessarily lead to professional development. Our participants were intensely involved in information interaction in their field of interest. These exceptional SNS users were actively and deeply involved in several topics, and this initial involvement turned their daily navigations with SNSs into meaningful exploration processes that facilitate identity development (Flum & Kaplan, 2006, 2012). The longitudinal method we adopted revealed how eagerness to learn, activeness in a field of interest, high motivation for development, intensive acquisition of information activities, and the ongoing process of building social circles and social interaction, all led to accelerated professional identity development. The main novelty of this study relies on the identification of a phenomenon that fueled professional development – the antagonism between affordances and constraints, which creates tensions that trigger the users’ awareness to self-expression, sociality, and interaction with information. Our findings are in line with previous studies according to which SNSs create tensions and summon antagonist features that create these tensions: tension between private and public (Shane-Simpson et al., 2018), the tension between professional identity and personal identity (Kimmons & Veletsianos, 2014) and between past and present self-expressions and self-presentation (Brandtzaeg and Chaparro-Domínguez, 2020). Previous studies also indicate that SNSs have their benefits and costs, as they challenge self-presentation, privacy, sociality, and overload users with information and connections (Gao, 2018; Manago, 2014). Our study shows that these tensions are at the root of professional identity development.

More specifically, SNSs are generally understood as affording online social connections. And in the last few years it was found that they also afford extended self-expression (Manago, 2015). These two affordances are a priori antagonistic. However, we found that, among our highly motivated participants, SNSs afforded the cohabitation of antagonistic affordances towards the promotion of three SNS components of professional development – self-expression, sociality, and interaction with information. In Table 5, we present how SNSs afford antagonistic processes, based on the analysis of the users’ events of interacting with SNS.

**Table 5. Antagonistic SNS affordances identified in the participants’ interactions**

Intimate peer interactions	vs	Self-broadcasting	Self-expression affordances
Authentic presentation		Tailored self-presentation	
Discussion group		One-on-One interaction with peer groups	
Peer comparison	vs	Meaningful feedback	Sociality affordances
Real-time (immediate) interaction		A-synchronous interaction	
Unknown people as ‘friends’		Compatible peer circles	
Copyright awareness		Privacy awareness	
Personal information spaces	vs	Public information sharing	Information interaction affordances
Exposure to information by peers		Exposure to information by subject	
Unplanned information encounters		Intentional information acquisition	
Information overflow and exposure to non-relevant information.		Relevant information	

We suggest that the tensions that arise from the antagonistic affordances and the challenges SNSs provide for us also play a crucial role in identity development, since they raise user awareness. The antagonistic affordances require our participants to make choices, to decide how to present themselves, in what circle of friends they wish to publish, and what to publish; the SNSs antagonistic affordances forced the user to decide how to acquire information and how to organize it. On the one hand, the need to choose makes SNSs challenging, but on the other hand, it also acts as a facilitating factor. It makes SNSs suitable platforms to summon awareness to the possibilities opened by SNSs, to the challenges they raise and to possible implications on professional identity development. The antagonistic affordances made the users more reflective. The participants spoke about the implication of their actions for themselves, their challenges, and their development. The following reports, gleaned from the participants' interviews, exemplify these phenomena: "me and my Facebook have a very complicated relationship... you should be careful with comparisons in SNS..." (A:F:36); "these concepts are related to my feminist identity." (Y:F:19); "What's interesting is my creativity and my development..." (O:F:50); "This came when I was much more emotionally mature, I didn't know how much I knew, and I didn't know how to express it. You need courage to expose" (A:F:36); "I said to myself OK, this [Pinterest's' followers] is a monster, and I cannot control it, and I have never controlled it until today, and control is not the purpose" (O:F:50). Therefore, the participants are aware of their SNS activities, they choose when to be authentic and where to position themselves. Manago (2014) wrote that SNS is characterized by tailor-made self-presentation; it has its benefits and costs. However, the awareness of professional identity formation comes with the motivation to create and control the self-presentation; SNSs enable editing and the frequent change of self-presentation and, therefore, they enable the development.

To sum up, we suggest that SNSs enable the enhanced development of identity since they afford many different activities, which are antagonistic to one another. Hence, in order to learn and develop through SNSs, users must be aware and reflect on their activities and their choices. These observations broaden the understanding of SNSs as platforms, which are characterized by public self-presentation and compatible sociality (Manago, 2015), and show that SNSs bring new and unique characteristics for valuable professional identity development – intensive interaction with knowledge construction.

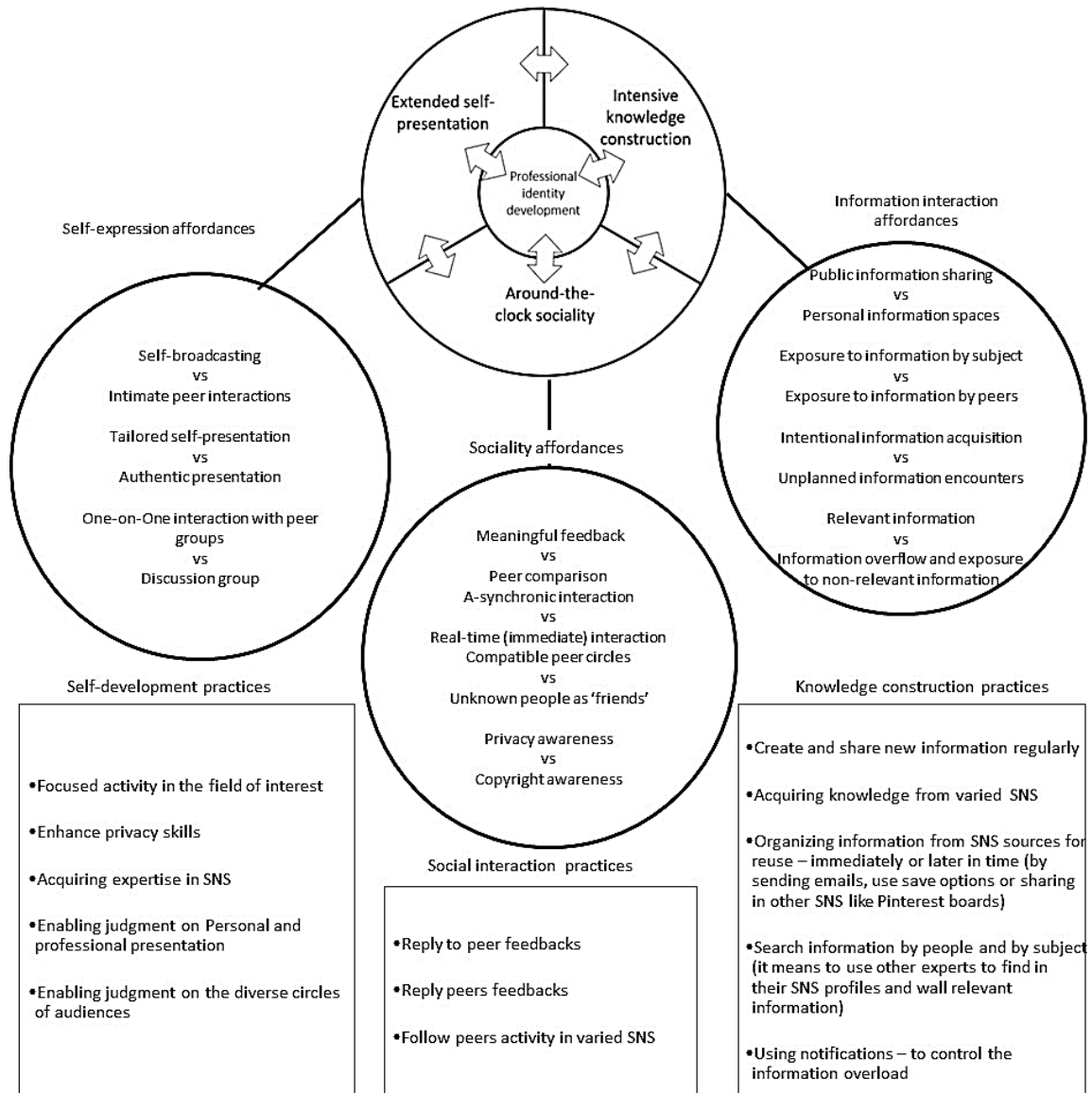
## CONCLUSIONS

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To conclude, we found that SNSs have the potential to afford an accelerated process of professional identity development through an extensive process of organizing and sharing knowledge in a specific field of interest. This process is based on three main components: extended self-presentation, intensive knowledge construction, and round the clock sociality. SNSs were found to afford antagonistic actions for each of the components. Based on our findings, we suggest a new framework of development in SNSs. The framework is diagrammatically displayed in Figure 2.

The suggested framework can be adopted in higher education and high schools in order to use SNSs as tools for learning and developing through a process of deliberate activity of interaction with information related to the self-exploration activities (Flum & Kaplan, 2006). Bridgstock (2019) already claimed that SNSs should be used for professional development in academic courses. Brandtzaeg and Chaparro-Domínguez (2020) show how social media may have long-lasting consequences in life transitions, from youth to professional adults. Studies suggest providing institutional and academic guidance for students regarding the use of SNSs in forming digital professional identity (Jackson & Bridgstock; 2020; Jawed, Mahboob & Yasmeen, 2019; Starcic et al. 2017).

Our framework displayed in Figure 2 provides a specific model for how the SNSs affordances can function as a collaborative learning and development space when users enact proper practices. The framework can fit a classroom, college, or university situation and can help enabling young students to acquire the skills and experiences of how to develop a field of interest using SNSs. It shows the three main components and their antagonistic affordances.



**Figure 2. A conceptual framework of development of professional identity with SNSs**

The conceptual framework can help educational institutions to implement SNSs in order to enhance professional identity development by helping teachers to guide professional identity development. Guidance will allow students to handle the antagonistic affordances for self-presentation, sociality, and information management. By doing so, the guides will help achieving meaningful SNS activities by encouraging students to be focused and involved in their fields of interest, thereby enhancing their abilities and helping to turn their interests into expertise. Future studies may examine the implementation of SNSs for the exploration process leading to identity development in various educational institutions. Moreover, when self-monitoring and self-management tools are available for learning by quantified-self applications (Arnold et al., 2017; Buongiorno, 2017; Kristensen & Ruckenstein, 2018), our framework may be used in order to combine SNSs in future self-monitoring and self-management tools. It may help handling information available through automatic analysis, on the one hand, while, on the other hand, adding an intelligent quantified-self application, which will help SNS users to harness its potential for professional identity development. The quantified-self application might help learners to monitor and manage presentation of the extended self, to afford around-the-clock

sociality and intensive knowledge construction of SNSs, to enhance awareness and reflection, and to help learners enhance their professional identity development by using SNSs.

The fact that our conceptual framework is based on seven participants who accepted to share the information and their knowledge limits the scope of the present study. Further research is required to observe more users and the implication of SNSs information organization and sharing in a formal assignment in academic or other professional identity development settings. Moreover, the study followed the participants for one year. It is needed to keep following these users to understand how stable their professional identity development is in longer periods.

## ACKNOWLEDGEMENTS

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The research reported here was conducted financially supported by MOFET – the Israeli Institute for Teacher Development.

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