

THE RELATIONSHIP BETWEEN STUDENTS' PERSONALITY TRAITS AND PRIVACY PREFERENCES IN ARCHITECTURE STUDIO

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Abstract: The architecture studio is an important learning space of architectural education. However, there is little empirical research data available especially in relation to student personality and privacy dimensions. The aim of this study is therefore to explore the relationship between personality traits of architecture students and their privacy preference in architecture studio. A total number of one hundred and fifty two undergraduate architecture students responded to the questionnaire survey. The Big Five Inventory-10 (BFI-10) and Privacy Questionnaire were used as the research instruments. Pearson product moment correlations indicated that personality traits tended to be associated with privacy preferences. The personality dimensions of Conscientiousness was negatively correlated with Reserve. Students high in both Extraversion and Agreeableness inclined to not select Reserve and Isolation. Those Neurotic individuals were more likely to choose Intimacy with Family. However, no relationship was found for the Openness with any privacy dimensions. The significant relationships established in this research has shed new light on revealing students' behaviour in studio context. The findings could serve as a good source of design reference in architecture studio setting and act as a springboard for further research.

Keywords: Personality Traits, Big Five, Privacy, Architecture Studio, Architectural Education.

INTRODUCTION

The practice of architecture is a direct response to the primary need for all humans for shelter and comfort (French, 1998). This discipline involves the practice of designing and constructing buildings. According to Broadbent's claim (Broadbent, 1995), architects must possess knowledge of numerous crafts, technologies and be able to communicate this information to specialists within various fields. Said more succinctly, architecture is a multi-skilled, multi-media and multi-dimensional industry while being a self-sufficient profession behaving in such a manner to make it seem as if it is in possession of all the knowledge it will ever need (French, 1998; Teymur, 1992).

Architecture education is a vocational training education and so much more. During the educational process, students are taught not only to solve problems, but they are also taught how to determine already existing problems. Architecture education is practiced with its own set of specifications and is therefore distinctive

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from the education of other disciplines. It was Outram (Outram, 1996) who described the function provided by architecture institutions and schools as aiding beginner students think of architecture by training them to interrogate the medium and think the thoughts.

THE VITAL ROLE OF DESIGN STUDIO

The role of a design studio in architectural education is vital (Wong and Jusan, 2017). It's at the core of the curriculum and every course in design is related to the studio. Students of architecture gain theoretical as well as practical knowledge using the design studio process and learn how to transform knowledge gained and the imagination into a design. It is in the environment of the architecture studio where design courses typically take place. This environment is different from other more traditional style classrooms in its pedagogical, educational and social viewpoints. The studio setting functions as an educational centre as well as a social organization with complexities (Deasy and Lasswell, 1985; Demirbas, 1997). This provides an atmosphere which is conducive to freely exchanged ideas (Tate, 1987) that offer a way to process information that can be thought of as a social and organizational process (Iivari and Hirschheim, 1996) for students and their instructors.

The architecture studio experience is intended to open the eyes of students to design opportunities and they are expected to utilize it during class hours and free time periods as they wish. Students can expect to use much of their study time working on design projects individually as well as in groups in this setting (Demirbas, 1997; Stamps, 1994). Using this point of view or architecture, the claim is that the studio should be a living space in which the architecture studio becomes a space for life (Demirbas and Demirkan, 2000). The idea is to create a flow of knowledge between all students of the studio environment. All in all, the basic style for this architecture education is dependent upon how well information is disseminated between individuals and groups of individuals through interactions.

The architecture studio is where design of cities, buildings and other spaces is created to improve or transform the same and this is crucial (Teymur, 1992). Nevertheless, the lack of empirical research data into its efficacy is lacking because of the complexity surrounding the teaching and learning process of an architecture studio (Demirbas and Demirkan, 2000; Durling *et al.*, 1996; Huang, 1998; Lueth, 2008; Obeidat and Al-Share, 2012; Wong and Jusan, 2017). In general, the role of the studio setting for the study of architecture is being kept to a minimum along with its personality and privacy dimensions. The result is that there is little systematic documentation which in turn causes a bottleneck for educators and designers when it comes to providing a preferable environment for an architecture studio. The purpose of this study is to explore the relationship between student's privacy preference and the personal traits of students of architecture.

PERSONALITY OF ARCHITECTURE STUDENTS

The effect that personality has on other areas of life has been examined in many researches (Burger, 1995; Durling *et al.*, 1996; Furnham *et al.*, 2009; Grove and Eisenman, 1970; Hargett, 2011; Harms *et al.*, 2006; Kayış *et al.*, 2016; Maslow, 1954; Payne *et al.*, 1975; Schmidt, 1973). Studies on the effect personality has on privacy preferences are fairly limited. Nonetheless, the close link between privacy preferences and personality is widely acknowledged (Marshall, 1970a, 1970b; Pedersen, 1982b). The personality we have is a unique attribute, which typically defines who we are. Burger said that our personality can be described using six broad approaches, which are the trait approach, the psychoanalytic approach, the humanistic approach, the biological approach, the cognitive approach and the social or behavioural learning approach (Burger, 2011). This study uses the trait approach, which assumes that differences in behaviour between students are reasonably consistent over time, and in different circumstances (Burger, 2011; John and Srivastava, 1999; Myers, 1980; Myers *et al.*, 1985). There are lots of ways of determining personality characteristics. A couple of the more famous methods are the Big Five Inventory (BFI) and the Myers–Briggs Type Indicator (MBTI). The former was utilized for this study. BFI consists of five factors, namely Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism that form the acronym OCEAN.

The Big Five Inventory (BFI)

Oliver John created BFI, and he discovered it through statistical analysis of how various personality characteristics can be connected to describe certain human attributes. This BFI evolved from the analysis of characteristics that usually exhibit themselves in the general population (John and Srivastava, 1999; McCrae and John, 1992). For instance, moodiness and anxiety are both characteristics linked to being Neurotic, however someone can have anxiety without exhibiting moodiness. Because all humans are unique, variations exist. Nonetheless, statistical data shows that the majority of people with anxiety are moody as well, accounting for the wider definition of 'Neuroticism'. The secret to comprehending the BFI is to acknowledge that they are deliberately broad, and that every dimension contains more detailed traits. These are the broad dimensions of BFI (John and Srivastava, 1999; McCrae and John, 1992):

Openness

Openness to new experiences concentrates on appreciating beauty and art, along with a general openness to novelty. It relates to attributes like imaginative, creative, curious, abstract, inventive and deep thinkers. People who exhibit these characteristics are usually more creative and adventurous, and often have a wide variety of interests. People who lack these characteristics are usually more conventional, and might find abstract thinking difficult.

Conscientiousness

Typical traits of Conscientiousness are a high degree of thoughtfulness, with effective impulse control and ambitious tendencies centered on the concept of perseverance and organization. People with high Conscientiousness are usually reliable, thorough, goal focused, hardworking, good planners and efficient. People who score low marks for this trait are more disorganized, careless, impulsive and bad at timekeeping.

Extraversion

Extraversion concentrates on social skills and where people obtain their energy. People who have high extroversion are energetic, talkative, outgoing, enthusiastic, and usually thrive in social situations. In contrast, people who have low extroversion levels are typically quieter, more shy and reserved, and find social situations emotionally draining.

Agreeableness

The dimensions of Agreeableness revolve around the concept of honesty, compliance and trust. Agreeableness includes characteristics like helpfulness, trust, forgiveness, kindness, altruism, affection and similar prosocial tendencies. People with high agreeableness levels are usually more cooperative, whereas people who lack this trait are often more manipulative and competitive.

Neuroticism

Neuroticism focuses on the effects of negative feelings. It is an attribute characterized by anxiety, easily upset or flustered and moodiness. People who exhibit this trait normally encounter anxiety, mood swings, irritability, sadness and moodiness. People who lack this characteristic are often more emotionally robust and mentally stable.

The Range between Two Extremes of BFI

It is vital to be aware that all of the five traits mentioned above represent a range between polar opposites. For instance, extraversion signifies a continuum between severe extraversion and severe introversion. In day to day life, the majority of people fall somewhere in the middle of the two extremes of each Big Five dimension. Undoubtedly, being able to identify these dimensions amongst students helps in understanding the essence of the human condition.

PRIVACY REGULATION IN ARCHITECTURE STUDIO

Newell (Newell, 1995), in his review of privacy demonstrated that research on the topic had proceeded through several perspectives in both theoretical and experimental branches of study. Privacy is defined as the ability to selectively control the accessibility of one's self or group (Altman, 1976). Such a definition includes two important facets of privacy. First, it is possible to gain privacy by withdrawal or separation of yourself from other humans. This includes one's desire for seclusion. However, there is a second important facet of privacy, which recognizes the human ability to personalize one's own space and regulate the information one allows others to know about him (Altman, 1976; Ittelson, 1974). Therefore, privacy is a process that remains dynamic as it relates to an individual's closeness or openness to others (Altman and Chemers, 1980).

Privacy Dimensions

Privacy researchers often rely on Alan Westin's pioneering typology (Westin and Solove, 2015), which describes the four faces of privacy: Intimacy, Solitude, Reserve and Anonymity. Intimacy refers to group solitude and is often used to describe two lovers and their desire to be alone, while Solitude refers to an individual being alone. Solitude includes the lack of the invasion from others, and Reserve indicates building psychological barriers to the interference of others in order to protect inner feelings and thoughts. In a practical way, Reserve limits the communication one shares with others whether publicly or privately. Anonymity is a type of privacy where a person is in a crowd but eliminates personal identifiers and does not interact personally with others in the group. Westin's four factors were confirmed by Darhl Pedersen, who also further refined them by suggesting two forms of Intimacy with Friends and that one has with family (Pedersen, 1979, 1982a). He refined Isolation from Solitude. According to Pedersen, a person who is truly alone, with no other humans around is experiencing Isolation while Solitude involves being alone while others are around.

Functions of Privacy

The understanding of privacy greatly depends on personality, cultural background, gender, experiences, socioeconomic levels and stage of life. Social behaviors and norms also help to shape better understanding of the concept. Some see it as a need, preference, or personal value while others understand privacy as a behavioral expectation (Altman, 1975; Altman, 1976; Altman, 1977; Newell, 1984, 1994, 1995, 1998). Westin defined four important functions of privacy, including integrating information about relationships and self, giving a feeling of control, regulating and protecting communication and providing for emotional release (Westin and Solove,

2015). Pedersen further described it as a basic need of all humans, necessary for rejuvenation, uninterrupted contemplation, expressing creativity, recovery, and concealment of illegal activities as well as one's self (Pedersen, 1997, 1999). Without adequate privacy, it is easy to feel out of control of one's life. For students, this can translate into learned hopelessness, learned dependence and a lack of autonomy.

The Relationship of Privacy and Personality

Psychologists continue to investigate the relationship between privacy and personality. Individuals who have more need for privacy generally are more anxious and less confident (McKechnie, 1974). Another research indicated greater distractibility among individuals who feel they lack privacy (Marshall, 1972). Pedersen's study discovered individuals who tend to be more reserved along with those who long for more solitude or anonymity also express a lower self-esteem (Pedersen, 1982a, 1982b). The more introspective an individual, the more likely he will exhibit a reserved personality. Such individuals also seek less intimacy with family.

METHOD

This case study research was quantitative in nature. It was conducted using a questionnaire consisting of three sections. The first section collected student's personal information including age, sex, and current year of study. The second and third sections measured personality and privacy preference respectively with closed-ended questions design. Both sections allowed student to indicate how strongly they agreed or disagreed with the given statements using Likert Scale. Each query had five likely response choices: 1 being Strongly Disagree; 2 being Disagree; 3 being Neutral; 4 being Agree; and 5 being Strongly Agree. The two pages questionnaire was designed for its concise and exact nature. To eliminate student's concentration and fatigue issue, the questions were formatted in simple and easy manner. Student took only twenty minutes or less on an average to complete it.

10-Item Big Five Inventory (BFI-10)

The 10-Item short version of the Big Five Inventory was employed to measure personality in second section of the questionnaire (Rammstedt and John, 2007). BFI-10 has only ten items. It is the shorter version of Big Five Inventory (BFI-44) which consists of 44 items. Although BFI-10 contains far less items than BFI-44, it retains significant levels of reliability and validity (Rammstedt and John, 2007). Moreover, it reduces respondent's boredom and frustration of answering the similar questions repetitively.

Privacy Questionnaire

The final part of the questionnaire covered 27 items measuring six states of privacy dimensions. The version used in this study was developed by Demirbas and Demirkan (Demirbas and Demirkan, 2000). It was based on the privacy questionnaire by Pedersen (Pedersen, 1979), and Rustemli and Kokdemir (Rustemli and Kokdemir, 1993) but worded more relevant to the studio context.

Participants

The by hand survey invitations were carried out in University College of Technology Sarawak, Malaysia during the first week of December 2016. The survey received feedback from a total number of 152 respondents from the Department of Architecture, School of Built Environment, within a week. A response rate of 90 per cent generated from total population of 168 architecture students. The respondents were undergraduate architecture students who were pursuing their first degree of architecture. Year 1 and Year 2 students comprised 79 percent of the total respondents with 60 students each. 32 students were from Year 3 make up the remaining 21 per cent. The sample consisted of 86 males (57%) and 66 females (43%). The average age of the respondents was 20, in a range of 18 to 29.

FINDINGS AND DISCUSSION

The result as shown in Table 1 and Table 2 portrays students' personality traits and privacy preferences in the context of architecture studio respectively. Table 3 depicts correlations between personality traits and privacy dimensions.

TABLE 1: PERSONALITY TRAIT: MEANS, STANDARD DEVIATIONS, AND T-TEST VALUES ACCORDING TO GENDER

<i>Personality Trait</i>	<i>Gender</i>	<i>Number</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>T-test</i>
Openness	Male	86	2.94	0.38	
	Female	66	3.02	0.52	-1.08
	Combined	152	2.97	0.45	–
Conscientiousness	Male	86	3.04	0.60	
	Female	66	2.98	0.51	0.69
	Combined	152	3.01	0.56	–

<i>Personality Trait</i>	<i>Gender</i>	<i>Number</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>T-test</i>
Extraversion	Male	86	3.02	0.63	0.02
	Female	66	3.02	0.55	
	Combined	152	3.02	0.60	
Agreeableness	Male	86	3.30	0.69	0.21
	Female	66	3.28	0.55	
	Combined	152	3.29	0.63	
Neuroticism	Male	86	2.94	0.67	-2.17*
	Female	66	3.21	0.82	
	Combined	152	3.06	0.75	

* $p < 0.05$ level (2-tailed).

TABLE 2: STATE OF PRIVACY: MEANS, STANDARD DEVIATIONS, AND T-TEST VALUES ACCORDING TO GENDER

<i>State of Privacy</i>	<i>Gender</i>	<i>Number</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>T-test</i>
Solitude	Male	86	3.39	0.52	-0.62
	Female	66	3.44	0.53	-
	Combined	152	3.41	0.52	
Isolation	Male	86	3.27	0.62	
	Female	66	3.31	0.57	0
	Combined	152	3.29	0.60	
Intimacy with Friends	Male	86	3.49	0.50	
	Female	66	3.28	0.52	-
	Combined	152	3.40	0.52	
Intimacy with Family	Male	86	3.31	0.53	
	Female	66	3.37	0.53	-
	Combined	152	3.34	0.53	
Reserve	Male	86	3.21	0.67	
	Female	66	3.29	0.53	-
	Combined	152	3.25	0.62	
Anonymity	Male	86	3.11	0.32	
	Female	66	3.08	0.42	-
	Combined	152	3.10	0.37	

* $p < 0.05$ level (2-tailed).

TABLE 3: CORRELATIONS BETWEEN PERSONALITY TRAITS AND PRIVACY DIMENSIONS

	<i>Solitude</i>	<i>Reserve</i>	<i>Intimacy with Family</i>	<i>Intimacy with Friends</i>	<i>Anonymity</i>	<i>Isolation</i>
Openness	.140	.078	-.036	-.020	.084	-.048
Conscientiousness	-.052	-.169*	-.106	.056	-.147	-.053
Extraversion	-.058	-.275**	-.043	.156	.050	-.209**
Agreeableness	.068	-.279**	-.158	.069	.059	-.166*
Neuroticism	.024	.146	.215**	-.023	.113	.117

* *Correlation is significant at the 0.05 level (2-tailed).*

** *Correlation is significant at the 0.01 level (2-tailed).*

Seeking Creativity in Solitude

The findings contradict previous studies depicting that Solitude was the most preferred type of privacy (Demirbas, 1997; Demirbas and Demirkan, 2000; Rustemli and Kokdemir, 1993). Solitude is the most complete privacy stage students could achieve in architecture studio. Architecture students prefer to be alone and unobserved most of the time even though past finding proved that time spent with others is more pleasant than time spent alone (Larson, 1990). Loneliness and boredom are widespread social issues but not in this case (Peplau and Perlman, 1982). This is especially true when they need to concentrate on their design process. They need those moments of contemplation and reflection to express themselves freely and make sense of the design world. The nature of the design project requires planning and self-discovery processes free from physical invasion. Solitude gives students a perfect opportunity to experiment with new design ideas without fear of social condemnation. Solitude differs from Isolation in that architecture students do not need to remove themselves physically from architecture studio. Sometimes, students put up some physical barrier such as partitions against unwanted intrusions. Students can decide the time either to keep a distance from their course mates or join them whenever it deems necessary. The high preference for solitude does not reflect the rejection of social interaction. Rather, students spend the majority of their time in the presence of others due to the need of design process. They are not necessarily introverted type of people. Extraversion personality trait has nothing to do with the Solitude need in architecture studio. In fact, the condition of Solitude enhances the process of creativity more than Isolation.

Extroverted and Agreeable Students Disliked Isolation

Isolation from architecture studio and studio mates means no facility and moral support for creativity when required. In fact, physical separation in this case might hinder the design process and has a negative effect on students' performance. Consequently, Isolation was the third less preferred type of privacy. On the other hand, isolation from studio environment sometime has some beneficial effects. Some students prefer social isolation for reasons consistent with good adjustment and well-being (Burger, 1995). Maybe they believe that time spent away from other students is best for necessary self-reflection. Some students need those moments to work through their design problems and make important design decisions free from any kind of intervention. The negative correlation between preferences for Isolation and Extraversion provided some insight into this finding (Table 3). Students who score low on Extraversion dimension are more introverted in nature. Unlike extroverted students, introverted students are not energized by being around other studio mates. Most of the time, they prefer to be alone and isolated from the crowd mainly because of the excessive anxiety about social interactions. The fear of negative evaluation by others leads to the excessive levels of emotional intensity in peer interactions. Isolation is thus an escape route from being embarrassed, humiliated or rejected. Even students understand that their anxiety is irrational, they worry about the possibilities and decide to get away from the studio environment. Similar to Extraversion, Agreeableness correlates with Isolation negatively. Scoring low on Agreeableness indicates low concern with cooperation and social harmony. Disagreeable individuals do not value getting along with others as their main priorities. Their scepticism about others' motives generally have a pessimistic view of human nature. By placing self-interest above all, they are commonly known as unfriendly and uncooperative person in the architecture studio. Their tendency to be narcissistic and anti-social make them unpopular and difficult to make friends. Therefore, they tend to distance themselves from their studio mates. Undeniable, some of these introverted or disagreeable students are very good in design. The design world needs their unique thinking ability in design solution. The lack of studio presence in this group of students may be overcome by continual reassurances and encouragements from instructors and studio mates. They may change their privacy preferences, open their heart, and enjoy studio life with others.

Bonds of Brotherhood through Intimacy with Friends

Intimacy was the most chosen type of privacy after Solitude. Intimacy relates to an individual's or group's need to uphold close personal relationships with desired individuals. For that reason, Intimacy with Friends refers to students' desire to be alone with close studio mates. On the other hand, Intimacy with Family inclines more to spending time with family members. Intimacy will never happen without having an opportunity for privacy (Ittelson, 1974; Newell, 1995). However, intimacy with

neither friends nor family are intend to decrease social interaction. As a matter of fact, students attempt to minimize unnecessary outside social inputs but maximize social interactions within their desired group members. Between friends and family, students especially males as shown in Table 2 preferred to spend more time with former. Design is like a constant error correction. Making a mistake, and correcting, then making another mistake and correcting. As students, they need feedback and guidance to help them error correct in order to find their most appropriate design solution. Due to the nature of design course, students gain practical and theoretical knowledge not only from instructors but also through ideas exchange among course mates. Students have a preference to work with close studio mates only. They always look for buddies that are supportive, trustworthy and reliable. The close bonding of brotherhood in architecture studio is the perfect answer. They favour someone who are in same boat as them sharing the stress and depression together along the design process. They need support from buddies through tough design times, helping them to reach their goals together. Rather than relying on instructors, they prefer getting honest feedbacks from friends to improve their design.

Neurotic Students Preferred Intimacy with Family

Although Intimacy with Family on the other hand do not offer the same benefits as with friends, it no doubt offers safety heaven to students. Based on the t-test result (Table 2), there was no significant differences between male and female students in privacy preference except Intimacy with Friends ($t = 2.499, p = 0.014$). Compared to males, females preferred Intimacy with Family rather than with friends. In accordance to Table 3, neurotic personality trait was correlated to Intimacy with Family. Interestingly, female students were the group that have more neurotic personality traits (Table 1). Students with Neuroticism has long term tendency of mood swings. They tend to be in negative emotional state especially facing the challenging design process in design courses. Hence, spending time alone with family members resulted in relaxation. Students able to take refuge from studio world, express their emotion freely and recover from bad social experiences. They find sanctuary in both good and bad times in the open, loving arms of family. In family, they get the feeling that their true feelings and true self are accepted without any reservation. The support from family members cultivates their uniqueness and restores their confidence to face challenging architectural studies. Insecurities are a part of everyday life. It is human nature to feel a little insecure particularly in front of people that we don't trust. However, intimacy with family makes insecurities vanish without a trace. Due to the perceived safety among family members, students feel assertive and positive in engaging intended privacy behaviours. Unconditional acceptance from family members helps stabilize neurotic tendencies and restores confidence. For neurotic students, Intimacy with Family is a way of restoring their confidence again and moving forward.

Reserve Tendency in Low Conscientiousness, Extraversion, and Agreeableness

Similar to previous findings, Anonymity was the least preferred type of privacy followed by Reserve (Demirbas and Demirkan, 2000; Rustemli and Kokdemir, 1993). Anonymity or preserving the state of being anonymous in architecture studio aims to hide student's real identity. Unlike some other programmes that emphasize on lectures in big lecture theatres, architecture design studio courses are normally limited to a small number of population per studio. The ratio between instructor and students is usually around 1:12. Thus, instructors and students know each other well. So, moving around architecture studio without being known by others is impossible. Furthermore, architecture programme put high emphasis on communication both verbal and graphical presentation. Reserve by withholding personal design ideas from others is deemed quite difficult. Conscientiousness, Extraversion, and Agreeableness were negatively correlated with Reserve as depicted in Table 3. Reserve is perhaps the possible result of psychological hurt especially during design critique. The design critique is students' opportunity to present their design works and receiving feedbacks in return. However, taking criticism can be very stressful and painful to certain students especially those who score low on Extraversion or Agreeableness dimension. Although critiques are meant to improve output, students take them too personally. The critical or even negative comments about their design works destroy their confidence leading to social withdrawal. Reserve is therefore chosen to minimize social interaction. For those who are introverted or disagreeable, it is a greater sense of refuge by hiding their worst from others. Conscientious, extroverted, and agreeable students are however not taking such approach. Conscientious students believe in thorough planning and persistence by revealing all the details to avoid misunderstanding and achieve high levels of success. Besides, students on high side of Extraversion or Agreeableness are usually optimistic about life challenges and take a positive view of criticism. They believe that learning from mistakes will take them to the next level. The tendency to Anonymity and Reserve will not be decent for their development in design proficiency. Both Anonymity and Reserve are therefore not a desired state of privacy for architecture education.

CONCLUSION

Students spend long hours in architecture studio working on their design projects through their studies. Architecture studio as an education and communication place needs to be understudied and designed to support the exact functions of architectural studies. This present study supports to the notion that certain personality traits correlates of privacy preferences in architecture studio. The findings suggest that Solitude was the most preferred types of privacy and followed by Intimacy with Friends, and Intimacy with Family. Neuroticism was the only personality trait

that had a positive correlation with Intimacy with Family. Result demonstrated higher score of Neuroticism in female students comparing to male students. Female students favoured Intimacy with Family while Male students desired Intimacy with Friends. Architecture students in general prefer to spend a significant amount of their time alone either individually or with specific group for reasons other than social anxiety or withdrawal. When seeking privacy, students consider the needs of the design process. The attractiveness of particular privacy depends on the supportive experiences they receive in order to achieve their goal in architectural studies.

Isolation, Reserve, and Anonymity at the other hand were the least preferred mode of privacy. There was a negative correlation between both Extraversion and Agreeableness with Isolation and Reserve. In addition, Conscientiousness was negatively correlated with Reserve. Students low in Conscientiousness, Extraversion, and Agreeableness are anxious about social interactions in architecture studio context. This is the group of students who suffer from low self-confidence experience extreme stress and anxiety frequently in their studio life. Hence, preference of Isolation, Reserve, or Anonymity is not ideal for architecture students. It hinders their personal development over the academic years.

The results suggest the importance of clear layout organization and boundaries in studio environment to cater for difference students' need. The existence of clear distinction between private and public area ensure better sense of security in studio setting (Wong and Jusan, 2017). Students can decide the best time to work with their studio in group at group work area. If they wish to regulate incoming and outgoing information, they may spend their time alone or with close friends only at private workspace. The choice of being social connected or disconnected helps in smooth studio learning operation leading to better design outcomes.

The relationship between students' personality traits and their privacy preferences discussed in this article gives a meaningful insight into architecture studio as a life space. Designer and educator are able to make sensible decision in establishing supportive studio environment according to difference student needs. Since the main emphasis of this case study is limited to personality and privacy dimensions, the outcomes are not meant to function as a general guide for all studio design. Although all students need privacy, there are some notable differences in the way and degrees of privacy they require. These variances are influenced by socio-economic, values, culture, just to name a few. Furthermore, some other issues like technical factors, environmental psychology, departmental policy and so forth worth to be evaluated in creating more conducive studio learning environment. In sum, the significant of this study neither can be overemphasized nor understated. The findings could serve as a good source of design reference in architecture studio setting and acts as a springboard for further research.

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