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Research Article

Do the Imagination and Self-efficacy of Animation Majors Unlock the Gateway to Employment Kingdom?

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ABSTRACT

Although university students' imagination is a critical factor in improving employability, few researchers in previous studies have used empirical research methods to demonstrate the relationship between university students' imagination and employability. This study investigated the effects of three factors measuring imagination—initiating imagination, conceiving imagination, and transforming imagination—as well as self-efficacy on employability. An empirical study was conducted with 391 animation university students, and the results found that initiating imagination, conceiving imagination, and transforming imagination can affect employability directly or indirectly through self-efficacy, respectively.

Keywords: Animation; Imagination; Self-efficacy; Employability

INTRODUCTION

Imagination has been defined as "a creative faculty of the mind" or "a power of the mind" (Liang et al., 2012), which enables people to transcend experience and construct alternative possibilities, making fragmented situations into a meaningful whole (Passmore, 1985). Contemporary psychologists describe imagination as a "higher mental function" that "synthesizes aspects of memory or experience into a mental structure that is different from past or present perceived reality and predicts future reality" (Morosini, 2010). Liang and Chia (2014) state that human imagination can be categorized into three types of abilities. The first type of imagination refers more to something novel and unusual (initiating imagination). The second type has more to do with the ability to consciously or unconsciously conceptualize ideas (conceiving imagination). The third type emphasizes connecting unrelated things and making them concrete (transforming imagination). Imagination has an important role in employability and the job market (Teng et al., 2019). It was found in previous research that universities believe that a great deal of time is spent and many resources are provided for the development of student ground imagination (Teng et al., 2019). Their final findings suggest that university students in business majors believe that the university's current curriculum does not explicitly address the development of student imagination.

However, the researcher believes that the extent to which students identify with university-developed imagination may vary depending on the major. This is because, in addition to relying on imagination to explore future employability needed in the animation industry, animation students also need to rely on imagination to create unique storylines, character images, and visual effects, and universities encourage teachers to set up appropriate courses targeted to cultivate animation students' imagination (Cao, 2018). Meanwhile, Norton and Dalrymple (2020) noted that imagination is increasingly relevant to students majoring in the arts, humanities, and social sciences. Based on this, the researchers hypothesized that

animation students may identify more strongly with the university's preparation of students for imagination than students in the business universities.

To test this hypothesis, this study verifies the relationship between imagination and employability. If imagination is positively related to employability, then it can be inferred that there is a high level of student acceptance of the university's program to prepare students for imagination and that the university's program to prepare students for imagination is successful. This is because imagination is a soft skill (Teng et al., 2019), and one of the primary purposes of university programs related to soft skills is to develop students' employability (Tang, 2019). However, there is little quantitative research on the relationship between imagination and employability. In other words, there is scant evidence directly demonstrating that students' imagination positively influences their employability. Therefore, this study aims to address this research gap and test the aforementioned hypothesis.

In addition, it has been noted that an individual's self-efficacy has a significant impact on the development of their employability (Tentama & Nur, 2021). People with a high sense of self-efficacy tend to choose challenging tasks, set lofty goals, put in more effort, persevere for more extended periods, and recover quickly from setbacks, all of which are conducive to employability (Bandura, 1977). Based on this, this study will explore the direct and indirect relationships between the three latent variables of imagination: initiating imagination, conceiving imagination, and transforming imagination with self-efficacy and employability.

LITERATURE REVIEW

Imagination and employability

Employability has been redefined as pre-professional identity (Lundberg & Krogstie, 2020). It primarily involves the student's awareness of and connection to the chosen profession's skills, qualities, behaviors, values, and standards (Jackson, 2017). From this perspective, employability is not just about having the right skills and knowledge but also about understanding what career one wishes to pursue, how to work in that career, and what employability skills are needed (Lundberg & Krogstie, 2020). Imagination can reinforce the formation of this pre-professional identity during a student's education, which helps students "demonstrate readiness for employment and successfully apply the skills and knowledge they have acquired as professional novices to the graduate labor market " (Jackson, 2016). This helps students develop employability skills (Hager et al., 2002). At the same time, Lundberg and Krogstie (2020) stated that one of the main goals of higher education is to make students employable. In their study, they also said that imagination is an integral part of the terminology of employability and that imagining their future employment and being aware of the possibilities of their work is an integral part of developing pre-professional identity. Therefore, the following hypothesis can be formulated:

H1: Initiating imagination has a positive effect on employability

H2: Conceiving imagination has a positive impact on employability

H3: Transforming imagination has a positive impact on employability

Self-efficacy and employability

Self-efficacy refers to beliefs about an individual's ability to solve a problem or cope with a challenge within a specific range of abilities (Tannert & Gröschner, 2021). In a given situation, environmental and cognitive factors influence an individual's behavioral outcomes (Van et al., 2011), especially those beliefs that lead to success and behavior (Wang et al., 2014). They regarded these beliefs as self-efficacy, an essential cognitive variable in explaining how individuals form their behaviors and interact with their environment (Sheu et al., 2022). Self-efficacy has been widely used in education to explore the psycho-cognitive factors of students at different ages and its positive impact on academic performance and career development (Komarraju & Nadler, 2013; Burga et al., 2020). According to Dacre and Qualter (2013), students with high self-efficacy will seek out resources and opportunities to accomplish tasks and further promote the development of relevant abilities and skills (Burga et al., 2020). This is because students who are confident in their abilities will have more effective behaviors and better interpersonal relationships than those who are not (Zhao et al., 2021). Only by building and maintaining self-efficacy can be achieved by leveraging knowledge and resources (Lent et al., 2014; Sheu et al., 2017). In addition, self-efficacy can also be viewed as a solid positive self-perception and the process by which students solve problems and accomplish tasks through high self-efficacy, positively impacting student employability (Cacciolatti et al., 2017; Burga et al., 2020). Therefore, the following hypothesis can be formulated:

H4: Self-efficacy has a positive impact on employability

The mediating effect of self-efficacy between imagination and employability

Social Cognitive Career Theory (SCCT) emphasizes the mediating role of self-efficacy. According to Lent et al. (1994), self-efficacy is the critical structure of SCCT and is believed to impact behavior directly (Liguori et al., 2019). In addition, high self-efficacy positively affects their employability (Burga et al., 2020). Outcome expectation includes beliefs about the consequences of performing specific behaviors (Lent et al., 2002). It also involves the imagined outcomes. Thus, perceived future employability may be considered an outcome

expectation (Aydin, 2022). Learning experiences, on the other hand, are the origins of self-efficacy, and these origins are derived from the four factors of mastery experience, vicarious experience, social persuasion, and physiological states (Lent et al., 2017). The most relevant factor of these four factors to imagination is mastery experience, and it is also the most vital determinant of self-efficacy (Usher & Pajares, 2008). Mastery experience refers to the competencies and experiences an individual has acquired helpful for their development. Previous experiences of completing a task can increase a person's level of self-efficacy because these successes confirm an individual's competence (Chow et al., 2019). Vygotsky (2004) states that imagination is an ability to incorporate aspects of events, which suggests that students need to understand and process alternatives to visualize future work. This means that personal imagination is closely related to personal experience (Lundberg & Ness, 2020). It is essential for students to continuously acquire competencies and experiences that are useful for their development to imagine solutions to overcome difficulties and solve problems. Maddux and Kleiman (2016) suggest that overcoming difficulties through imagination can increase self-efficacy. Students with high self-efficacy demonstrate strong self-confidence in facing challenges, actively seek information appropriate to their career development, and engage in activities suitable for their personal growth, thus effectively enhancing their employability (Burga et al., 2020). Furthermore, self-efficacy has often been explored as a mediating variable in previous employability studies (Zhao et al., 2021; Wujema et al., 2022; Li et al., 2022). Based on social cognitive career theory and past research, the following hypotheses can be proposed:

H5: Initiating imagination has a positive impact on self-efficacy

H5a: Self-efficacy mediates the relationship between Initiating imagination and employability

H6: Conceiving imagination has a positive impact on self-efficacy

H6a: Self-efficacy mediates the relationship between conceiving imagination and employability

H7: Transforming imagination has a positive impact on self-efficacy

H7a: Self-efficacy mediates the relationship between transforming imagination and employability

METHOD

Participants and procedure

The participants of this study were students of animation majors from Chinese public universities. Among them, 212 (54.2%) were male and 179 (45.8%) were female. Regarding Place of Growth, 231 (59.1%) were urban, and 160 (40.9%) were rural. In terms of GPA, 6 participants (1.5%) had a GPA between 1 and ≤ 2, 74 participants (18.9%) had a GPA between > 2 and ≤ 3, and 311 participants (79.5%) had a GPA between > 3and ≤ 4. By the Helsinki Declaration, all participants voluntarily and anonymously agreed to participate in the research after being informed of its purpose. Their privacy and willingness were fully respected, and they were told they could refuse to participate or withdraw from the study at any time (Goodyear et al., 2007). This research also obtained research ethical document approval from the Ethics Committee of Mahachulalongkornrajavidyalaya University (Reference: MCU 8007/R.369).

Instruments

This study used well-established scales from previous studies with good reliability and validity on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). For scale items, please see Table 1.

Initiating imagination

This study used the initiating imagination scale developed by Liang and Chia (2014), to assess the initiating imagination of animation students. The scale consists of 9 items.

Conceiving imagination

This study used the conceiving imagination scale developed by Liang and Chia (2014), to assess the conceiving imagination of animation students. The scale consists of 12 items.

Transforming imagination

This study used the transforming imagination scale developed by Liang and Chia (2014), to assess the transforming imagination of animation students. The scale consists of 8 items.

Self-efficacy

This study used the transforming imagination scale developed by Zhao et al. (2021), to assess the self-efficacy of animation students. The scale consists of 6 items.

Employability

This study used the employability scale developed by Chughtai (2019), to assess the employability of animation students. The scale consists of 3 items.

Table 1. Questionnaire design.

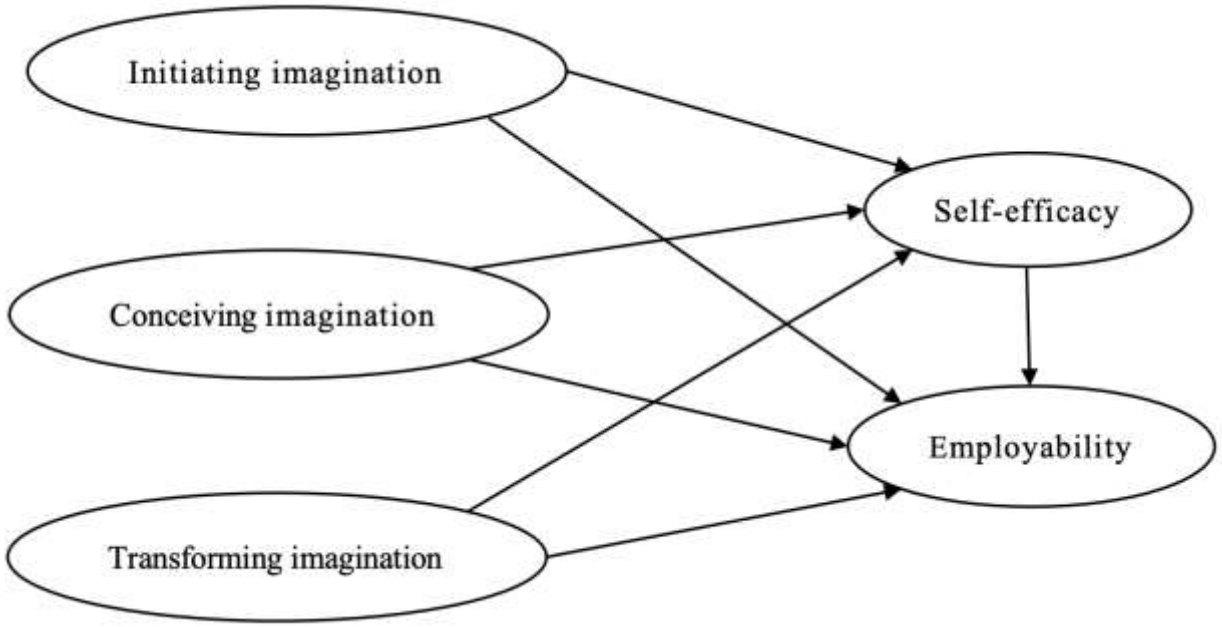
Variables	Items	Source
Initiating imagination	1. I often have unique ideas compared to others. 2. I can develop ideas by examining different perspectives. 3. I often try untraditional approaches in a project. 4. I often have a rich diversity of ideas. 5. I often use a variety of ways to express ideas. 6. I can constantly come up with various ways to do a project. 7. I often challenge existing ideas. 8. I often analyze numerous possibilities on how a problem may develop. 9. I like to explore the unknown through a variety of experiences.	Liang & Chia, 2014
Conceiving imagination	1. I am often emotionally involved in a project. 2. I can quickly sort out complicated messages. 3. I can quickly grasp the big picture. 4. I know how to concentrate on imagination and prevent myself from distraction. 5. I can continue to focus on a project until the ideas are formed. 6. I often invest prolonged time on the project until a resolution is found. 7. I can come up with an approach to meet the teacher's requirements. 8. I often set goals in accordance with my ability. 9. I constantly revise my ideas to reach satisfactory results. 10. I can deliberately think through the contradictions of a problem. 11. I can make a connection between seemingly unrelated matters. 12. I can ruminate on an assigned project and put forward different ideas.	
Transforming imagination	1. I often express my feelings by using concrete ideas. 2. I can express abstract ideas by using examples from daily life. 3. I can illustrate difficult ideas with some key concepts. 4. I can explain unfamiliar concepts with examples common to a target audience. 5. I can integrate different points of view into my way of thinking. 6. I often apply my experiences in daily life to class and work projects. 7. I can flexibly reproduce my ideas to multiple fields. 8. I can transfer similar ideas to various situations.	
Self-efficacy	1. I can remain calm when facing difficulties in my job because I can rely on my abilities. 2. When I am confronted with a problem in my learning tasks, I can usually find several solutions. 3. Whatever comes my way in my learning tasks, I can usually handle it. 4. My past experiences in my learning tasks have prepared me well for my occupational future. 5. I meet the goals that I set for myself in my learning tasks. 6. I feel prepared for most of the demands in my learning tasks.	Zhao et al., 2021
Employability	1. I believe I could easily obtain a comparable job with another employer. 2. I believe I could easily obtain another job that is in line with my level of education and experience. 3. I believe I could easily obtain another job that would give me a high level of satisfaction.	Chughtai, 2019

Procedure

The study used an online questionnaire to test the proposed conceptual framework on Chinese animation students. The questionnaire was written in English and translated into Chinese by a professional translator. Several faculty members from the animation program at the university assisted in distributing the questionnaires for the study and were paid a small amount of money for their efforts. They introduced the purpose of the survey to the students and distributed the questionnaire via WeChat to animation students enrolled at the university. A total of 391 valid responses were received.

Conceptual Framework

Figure 1. Conceptual Framework



RESULTS

Data analysis

To test the conceptual framework of this study, the researchers employed SPSS and AMOS statistical software to assess the structural model. This was done to verify the reliability and validity of the scale. For assessing reliability, Cronbach's alpha values and composite reliabilities greater than 0.7 were considered reliable (Hair et al., 2019). Convergent validity was deemed adequate if the external loadings of the measurement items exceeded 0.6 and the average variance extracted (AVE) for each construct was above 0.5 (Hair et al., 2019). Discriminant validity was evaluated using the Fornell and Larcker (1981) criterion, where the square root of the AVE for each construct should exceed its correlation with any other construct. Additionally, 'heterotrait-monotrait' (HTMT) values were examined to ensure they were below 0.85, as recommended by Hair et al. (2020).

Descriptive statistics for scale items

The mean, standard deviation, kurtosis, and skewness of each scale item are shown in Table 2. According to Schumacker and Lomax (2004), data can be considered to follow a normal distribution if the skewness and kurtosis values fall within the range of ± 2. Therefore, the data in this study were normally distributed (Hair et al., 2020).

Table 2. Descriptive analysis.

Constructs / Associated Items	Mean	Std. Deviation	Skewness	Kurtosis
Initiating Imagination	4.5737	1.30061	-0.778	-0.648
II1	4.6803	1.85572	-0.632	-0.693
II2	4.5601	1.60954	-0.337	-0.446
II3	4.6598	1.60109	-0.345	-0.51
II4	4.4859	1.65303	-0.208	-0.672
II5	4.5524	1.63038	-0.258	-0.679
II6	4.5857	1.63368	-0.233	-0.722
II7	4.5141	1.60102	-0.261	-0.599
II8	4.5652	1.60774	-0.319	-0.586

II9	4.5601	1.58869	-0.288	-0.501
Conceiving Imagination	4.8056	1.13165	-1.202	0.779
CI1	5.0563	1.6461	-0.78	-0.032
CI2	4.6726	1.51919	-0.484	-0.055
CI3	4.7698	1.47221	-0.349	-0.272
CI4	4.7494	1.44421	-0.253	-0.341
CI5	4.7852	1.50039	-0.399	-0.329
CI6	4.6343	1.39293	-0.145	-0.494
CI7	4.9974	1.51826	-0.579	-0.34
CI8	4.8593	1.48778	-0.321	-0.646
CI9	4.7647	1.71446	-0.505	-0.531
CI10	4.8542	1.60023	-0.568	-0.339
CI11	4.7340	1.46789	-0.363	-0.298
CI12	4.7903	1.44009	-0.302	-0.317
Transforming Imagination	4.6231	1.21914	-0.595	-0.696
TI1	4.5729	1.74361	-0.375	-0.742
TI2	4.6240	1.62491	-0.315	-0.597
TI3	4.6343	1.48557	-0.204	-0.558
TI4	4.6829	1.56129	-0.17	-0.563
TI5	4.5882	1.66156	-0.268	-0.709
TI6	4.5524	1.55965	-0.249	-0.464
TI7	4.7008	1.6455	-0.312	-0.604
TI8	4.6292	1.57808	-0.223	-0.595
Self-Efficacy	4.3457	1.2651	-0.415	-0.812
SE1	4.5371	1.79972	-0.364	-0.842
SE2	4.2327	1.55235	-0.112	-0.671
SE3	4.2711	1.54195	-0.073	-0.686
SE4	4.3529	1.50835	-0.223	-0.559
SE5	4.3836	1.53461	-0.128	-0.731
SE6	4.2967	1.61689	-0.156	-0.733
Employability	4.3598	1.28331	-0.287	-0.886
EMP1	4.4834	1.72882	-0.397	-0.778
EMP2	4.2583	1.45964	-0.023	-0.69
EMP3	4.3376	1.37322	-0.093	-0.578

Confirmatory factor analysis

A confirmatory factor analysis was conducted using the AMOS to evaluate the hypotheses proposed in this study. The reliability and validity of the measurement model were validated. The reliability and validity of initiating imagination, conceiving imagination, transforming imagination, self-efficacy, and employability had higher AVE and CR values than their benchmarks (0.50 and 0.70).

Regarding reliability, the researcher used Cronbach's alpha, and all the variables received Cronbach's alpha coefficients greater than 0.7, thus confirming the internal consistency of the variables in this study (Taber, 2018). The results of themeasurements are shown in Table 3.

Table 3. Assessment results of the measurement model.

Constructs / Associated Items	Loading	Cronbach's α	AVE	CR
Initiating Imagination				
II1	0.84			
II2	0.764			
II3	0.754			
II4	0.756			
II5	0.744	0.925	0.5798	0.9254
II6	0.749			
II7	0.743			
II8	0.75			
II9	0.748			
Conceiving Imagination				
CI1	0.832			
CI2	0.723			
CI3	0.722			
CI4	0.679			
CI5	0.690			

CI6	0.696	0.927	0.5162	0.9273
CI7	0.754			
CI8	0.721			
CI9	0.699			
CI10	0.724			
CI11	0.708			
CI12	0.659			
Transforming Imagination				
TI1	0.726			
TI2	0.691			
TI3	0.665	0.894	0.5160	0.8947
TI4	0.716			
TI5	0.816			
TI6	0.709			
TI7	0.699			
TI8	0.715			
Self-Efficacy				
SE1	0.824			
SE2	0.705			
SE3	0.706	0.882	0.5342	0.8727
SE4	0.688			
SE5	0.718			
SE6	0.736			
Employability				
EMP1	0.754			
EMP2	0.725	0.791	0.5220	0.7659
EMP3	0.687			

Note: CR = Composite Reliability, AVE = Average Variance Explained.

Correlation analysis and discrimination validity

On the basis of Pearson correlation analysis indicates the existence of a significant correlation among the variable. The results of this study demonstrate that the AVE value of the two variables is greater than the criteria for evaluating the validity of the difference (Fornell & Larcker,1981). As shown in Table 4, any two variables are characterized by good discriminative validity.

Table 4. Correlation analysis and discriminant validity of each variable.

Variable	II	CI	TI	SE	EMP
Initiating Imagination (II)	**0.761**				
Conceiving Imagination (CI)	0.143**	**0.718**			
Transforming Imagination (TI)	0.502**	0.212**	**0.718**		
Self-Efficacy (SE)	0.341**	0.356**	0.376**	**0.731**	
Employability (EMP)	0.424**	0.427**	0.497**	0.522**	**0.722**

Note: The bold diagonal factors represent the square root of the variance shared between the research factors and their measures. Off-diagonal factors denote the correlations among the study factors. The correlation is significant at the 0.01 level (two-tailed).

The structural equation model

The structural model was evaluated by applying structural equation modeling (SEM). The obtained structural model fit indices X^2= 969.276, df = 658, x^2/df = 1.473, IFI = 0.961, TLI = 0.958, CFI = 0.961, and RMSEA = 0.035, which indicate satisfactory model fit.

Hypothesis testing

Table 5. Results of structural model testing showed that initiating imagination significantly affects employability (β = 0.208, $p < 0.001$), so hypothesis 1 is supported. Conceiving imagination significantly affects employability (β = 0.302, $p < 0.001$), so hypothesis 2 is supported. Transforming imagination significantly affects employability (β = 0.315, $p < 0.001$), so hypothesis 3 is supported. Self-efficacy significantly affects employability (β = 0.338, $p < 0.001$), so hypothesis 4 is supported. Initiating imagination significantly affects self-efficacy (β = 0.221, $p < 0.001$), so hypothesis 5 is supported. Conceiving imagination significantly affects self-efficacy (β = 0.326, $p < 0.001$), so hypothesis 6 is supported. Transforming imagination significantly affects self-efficacy (β = 0.251, $p < 0.001$), so hypothesis 7 is supported.

Table 5. Results of structural model testing.

Hypothesis	Model Path	β-value	S.E.	C.R.	P- value	Test results
H1	II→EMP	0.208	0.054	4.224	***	Supported
H2	CI→EMP	0.302	0.074	5.893	***	Supported
H3	TI→EMP	0.315	0.061	4.660	***	Supported
H4	SE→EMP	0.338	0.052	5.589	***	Supported
H5	II→SE	0.221	0.063	4.036	***	Supported
H6	CI→SE	0.326	0.084	5.358	***	Supported
H7	TI→SE	0.251	0.069	5.691	***	Supported

Note: *P<0.05, **P<0.01,***p < 0.001. II: Initiating Imagination; CI: Conceiving Imagination; TI: Transforming Imagination; SE: Self-Efficacy; EMP: Employability

Mediation effects

To investigate the mediating role of self-efficacy, the present study assessed the direct, indirect, and total effects of imagination on employability. To test this mediating role, the present study followed Zhao et al.'s (2010) suggestion to conduct a comprehensive analysis of the covariance structural model using the bootstrap method. The effect of the independent variables (initiating imagination, conceiving imagination, transforming imagination) on the dependent variable (employability) was examined through the mediator (self-efficacy). The findings indicated that self-efficacy mediated between initiating imagination and employability ($\beta = 0.075$, $p < 0.01$), and hypothesis H5a was tested. Self-efficacy had a mediating effect ($\beta = 0.110$, $p < 0.001$) between conceiving imagination and employability, and hypothesis H6a was tested. Self-efficacy mediated between transforming imagination and employability ($\beta = 0.085$, $p < 0.001$), hypothesis H7a was validated. As shown in Table 6.

Table 6. Mediation effects

Hypothesis	Model Path	Indirect effect coefficient	P-value	Boot LLCI (95%)	Boot ULCI (95%)	Test results
H5a	II→SE→EMP	0.075	**	0.033	0.139	Supported
H6a	CI→SE→EMP	0.110	***	0.080	0.225	Supported
H7a	TI→SE→EMP	0.085	***	0.044	0.169	Supported

Note: *P<0.05, **P<0.01,***p < 0.001.

DISCUSSION

Implication to theories

This study contributes to the existing literature in several ways: First, it deepens our understanding of the positive impact of animation students' imagination on their employability. Second, it reveals the mediating role played by self-efficacy between imagination and employability. From a theoretical perspective, this study enriches research in this area by demonstrating the relationship between imagination and employability. Empirical studies have confirmed the relationship between initiating imagination, conceptualizing imagination, transforming imagination, and self-efficacy on employability.

The findings from this study, indicating that imagination and employability have a positive impact, confirm the usefulness of imagination as a generic skill for enhancing an individual's employability, as proposed by (Hager et al., 2002). Additionally, the results of this study address Teng et al.'s (2019) suggestion, from the perspective of students in different majors, that the reasons behind students' low agreement that universities prepare them for imagination could be explored in future research. Drawing on Teng et al.'s (2019) study, the researcher posits that the extent to which students perceive imagination as a component of the soft skills cultivated by universities may vary across different majors.

The results of this study also confirm the researcher's hypothesis that animation majors believe that imagination positively influences employability. This study empirically underscores the importance of self-efficacy as a psychological process that enhances employability among animation students. Consequently, the Social Cognitive Career Theory, particularly in relation to self-efficacy, emerges as a crucial framework for investigating the employability of animation students. Moreover, Social Cognitive Career Theory has been extensively applied in studying the employability of university students (Liu et al., 2020), serving as a foundational theory for exploring the relationship between self-efficacy and employability. Thus, self-efficacy significantly contributes to bolstering employability (Zhao et al., 2021).

Consistent with Maddux and Kleiman's (2016) perspective on the relationship between imagination and self-

efficacy, this study reveals that imagination can positively influence self-efficacy. Additionally, imagination can impact employability through self-efficacy. These findings suggest that students with a strong imagination may develop higher levels of self-efficacy. As a result, students with high self-efficacy are more likely to enhance their employability by actively seeking information to address challenges and engaging in activities conducive to personal growth when faced with difficulties.

Theoretically, the research model also offers further insights into understanding the relationship between imagination and employability, a connection notably absent in previous literature. Prior studies have generally only briefly addressed the potential positive relationship between imagination and employability (Wang, 2017; Lundberg & Ness, 2020; Shobha & Johnson, 2021). Empirical evidence demonstrating this relationship and the mediating role of self-efficacy between these variables remains limited. Therefore, this study utilizes the Social Cognitive Career Theory to provide additional theoretical grounding for this conceptual link. The significance of Social Cognitive Career Theory has been acknowledged in earlier research across various domains, such as retail (Zhang & Bloemer, 2011), healthcare (Erkutlu & Chafra, 2016), and online branding communities (Lee & Jeong, 2014). However, its role in the context of animation students has not been explored. Hence, this study serves as a foundational exploration aimed at better understanding the interplay among self-efficacy, imagination, and employability among animation students.

Implication to practitioners

Research indicates that imagination positively influences employability among animation students, while self-efficacy also plays a crucial role. Moreover, imagination can enhance employability through its impact on self-efficacy. These findings highlight the importance for practitioners to focus on cultivating students' imagination and enhancing their self-efficacy to effectively improve employability outcomes among animation students.

First, to enhance students' imagination, teachers can provide excellent learning resources, particularly diverse and exemplary examples of artwork. By presenting such examples, students are guided to initiate discussions and reflections on art. Throughout this process, teachers should consciously inspire students to innovate based on case studies and activate their prior knowledge when viewing artworks, thereby stimulating their imagination. For example, students should be encouraged to explore various forms of artwork, including paintings, sculptures, films, and television works. Analyzing outstanding artworks enables students to broaden their perspectives and stimulate their creativity.

Second, various creativity-inspiring activities, such as brainstorming sessions and story-writing competitions, should be organized to stimulate students' creativity and imagination. These activities enable students to freely use their imagination and experiment with new ideas. Teachers can provide personalized guidance and coaching to help students discover and realize their creative potential based on their interests and strengths. Additionally, collaborative projects and interdisciplinary learning opportunities should be encouraged, allowing students to interact with peers from different disciplines. Through such collaboration, students can explore diverse perspectives and further expand their imaginative capabilities.

Lastly, to enhance students' self-efficacy, practitioners can draw from Bandura's (2006) four conditions that trigger self-efficacy: mastery experience, vicarious experience, social persuasion, and physiological states. This study proposes strategies based on these aspects to enhance self-efficacy.

Enhancement of Mastery Experience: Universities can enhance students' employability by offering additional training opportunities. For instance, inviting human resource management executives to lecture university students in the preparatory stage of job search on skills valued by employers, interviewing techniques, and conducting simulated interviews can provide practical job-seeking experience, thereby enhancing students' self-efficacy.

Advancement of Vicarious Experience: Within the campus environment, students can actively support each other, gaining strengths not typically offered by family or societal networks. Educators can establish suitable role models among students, inspiring them to aspire to success through peers facing similar challenges. Witnessing the achievements of individuals with similar backgrounds can foster self-efficacy and confidence in achieving comparable goals.

Enhancement of Social Persuasion: Animation students transitioning from students to employees face internal and external factors such as personal aspirations, parental expectations, and job market conditions. Teachers can assist students in refining their job-seeking mentality, guiding them in career orientation and goal setting, and promoting job-seeking behaviors aligned with career values to enhance their self-efficacy. Additionally, teachers should provide ongoing career guidance covering career planning and job-seeking skills, empowering university students to define their career paths and strengthen their self-efficacy.

Enhancement of Physiological States: Animation students should adjust their mindset, address setbacks in their job search journey, conduct a thorough analysis of strengths and weaknesses, identify barriers to successful employment, and take proactive steps toward self-improvement. Reflecting on unsuccessful job hunting attempts can lead to identifying improvement strategies, enhancing job-seeking skills, building confidence, and increasing employability to seize opportunities for personal growth.

RESEARCH LIMITATIONS

While the current study has provided valuable insights, there are several limitations that need to be acknowledged. Firstly, the study utilized cross-sectional data, limiting the ability to establish causal relationships. Caution must be exercised when inferring mediators due to the absence of temporal prioritization in assessing multiple variables (Kline, 2015). Therefore, future research could employ longitudinal research designs and explore alternative methodologies to examine the proposed framework. Secondly, to further corroborate the validity of the study's findings, future research could conduct interviews with university students across different disciplines to investigate whether the choice of major influences the relationship between imagination and employability. Lastly, future research could explore the impact of additional variables on these relationships.

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