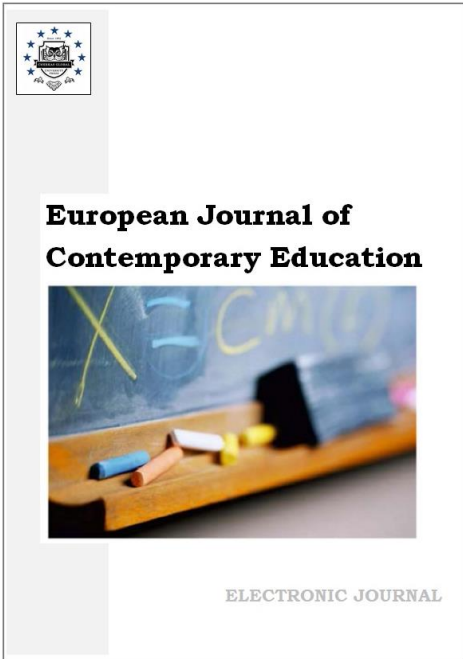




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Academic Motivation of First-Year Pedagogical Students in Vietnam: Case Study

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Abstract

This research was conducted to examine the academic motivation of 892 first-year pedagogical students at Hanoi National University of Education in Vietnam. This research mainly follows the approach of self-determination theory. The research instrument is the Academic Motivation Scale including 27 items: 12 items reflecting intrinsic academic motivation (IAM), 11 items reflecting extrinsic academic motivation (EAM) and 4 items reflecting amotivation. The results show that first-year students have a higher EAM than IAM. Among the total sample group, about 4.7 % of students are amotivated. Three aspects of IAM, including IAM-to know, IAM-toward accomplishment and IAM-to experience are positively correlated with each other; and three regulations of EAM such as identified regulation, introjected regulation, and external regulation are also positively correlated with each other. Female students have higher EAM than male students, particularly in EAM-introjected regulation and EAM-external regulation. IAM-toward accomplishment is many students' weakest motivation for different socio-demographic characteristics (female, academic majors, academic levels, family economic situations, authoritative parenting style, authoritarian parenting style, uninvolved parenting style). These findings offer several new hypotheses and research questions concerning the academic motivation continuum of the first-year pedagogical students, related variables to their academic motivation continuum, and measures to develop, maintain and enhance the academic motivation for pedagogical students. Limitations of this study and possible future research directions on pedagogical students' academic motivation are also mentioned in the discussion and conclusion.

Keywords: pedagogical students, academic motivation, freshman, intrinsic academic motivation, extrinsic academic motivation, amotivation.

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1. Introduction

Motivation is a hypothetical construct used to describe the internal and/or extrinsic forces that induce the initiation, direction, intensity, and persistence of a behavior (Vallerand et al., 1993). Academic motivation is the driving force that promotes, directs, empowers, and maintains learning activities for the purpose of meeting the needs and stimulating the learning interests of learners. (Deci, Ryan, 2002; Phan, 2005; Duong, 2013; Nguyen, 2015a; Bui, 2017; Pham, 2018). EAM is the performance of a learning action in order to achieve a result that is associated with the learning action itself, or to avoid something (Deci, Ryan, 2000b). IAM is the contentment and satisfaction that comes from within when participating in learning activities with a high degree of autonomy, in order to promote and develop the process of learning to understand, learning toward accomplishment and learning to experience stimulation (Deci, 1975; Bates, 1979; Gottfried, 1983; Deci et al., 1991; Vallerand et al., 1992; Cordor, 1999; Deci, Ryan, 2000b; Woolfolk, 2008). Amotivation is a consequence of depreciating and undervaluing the relevance of the learning task (Ryan, 1995), underrating one's ability to carry out and perform the work (Bandura, 1986) or disbelieving one's expectation that the effort would result in the desired outcome (Seligman, 1975).

At present, academic motivation is generally considered on a broad continuum (Deci, Ryan, 2000b). According to the theoretical model of self-determination, the individual's motivations are sorted according to the degree of autonomy in behavior, and extrinsic motivation is not opposed to intrinsic motivation (Deci, Ryan, 1985; Deci, Ryan, 1991; Vallerand et al., 1992). An individual's motivation is classified into three groups: amotivation, extrinsic motivation (with four types of regulations: external regulation, introjected regulation, identified regulation, integrated regulation), and intrinsic motivation. Six types of motivation are distributed over a continuum and are ordered by the increasing degree of autonomy as follows: amotivation, extrinsic motivation-external regulation, extrinsic motivation-introjected regulation, extrinsic motivation-identified regulation, extrinsic motivation-integrated regulation, and intrinsic motivation (Deci, Ryan, 1985; Deci, Ryan, 1991).

On the spectrum of academic motivation (Figure 1), EAM-external regulation is understood as a motivation of external pressure, which is regulated by compliance and conformity and the individual learns to receive positive reinforcement and avoid punishment and threats. EAM-introjected regulation is an extrinsic motivation driven by self-control, ego-involvement, and responding to internal pressure. EAM-identified regulation is a somewhat intrinsic and usefulness-driven motivation; which means that students realize the importance of learning for themselves, and are aware of the value of activities. EAM-integrated regulation is an intrinsic motivation, in which, students participate in learning activities because it corresponds to their own deeply held values.

Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Regulatory styles	<i>Non-regulation</i>	<i>External regulation</i>	<i>Introjected regulation</i>	<i>Identified regulation</i>	<i>Integrated regulation</i>	<i>Intrinsic regulation</i>
Source of the motivation	Impersonal	External	Somewhat external	Somewhat internal	Internal	Internal
Regulatory processes	Non-intentional, nonvaluing, incompetence, lack of control	Compliance, external rewards and punishments	Self-control, ego-involvement, internal rewards and punishments	Personal importance, conscious valuing	Congruence, awareness, synthesis with self	Interest, enjoyment, isatisfaction
	Nonself-determined			Self-determined		

Fig. 1. A Self-Determination Theory Framework-adapted (Ryan, Deci, 2000)

Intrinsic motivation implies that the student is self-motivated and self-determined, and that the individual is driven by interest, delight, and satisfaction inherent in the involved behavior or

activity. It is categorized as three types: intrinsic motivation-to know, intrinsic motivation-toward accomplishment and intrinsic motivation-to experience stimulation. Students' intrinsic motivation-to know expresses itself in the way that they are joyful and fulfilled when they learn new and favorite topics; they are excited to discover new things and to understand knowledge from beloved subjects. Students' IAM-toward accomplishment manifests as a desire to outperform themselves in order to conquer topics, achieve learning goals, or do something, and for gratification when in the process of tackling tough tasks. IAM-to experience stimulation in students implies learning for sensory pleasure, excitement, or delight. In other words, individuals study because they love exchanging ideas/perspectives with others, reading about a preferred topic, reading a good paper or book, and being immersed in new knowledge.

The study of students' academic motivation has drawn a lot of interest. The research is varied, using a variety of approaches and methodologies. (Deci et al., 1981; Wigfield, 1994; Murphy, Alexander, 2000; Nguyen, 2015a; Vietnam Psycho-Pedagogical Association, 2015; Chia et al., 2016; Liu et al., 2016; Chemsu et al., 2020). There are studies that focus on understanding specific approaches in the research of university students (Wigfield, 1994; Deci, Ryan, 2000b; Murphy, Alexander, 2000; Niemiec, Ryan, 2009; Wigfield, Cambria, 2010; Duong, 2013; Ngo, Le, 2015; Nguyen, 2015; Liu et al., 2016; Pham, 2018). There are studies that have been conducted to determine the overall state of students' academic motivation, with a focus on identifying the manifestations of various academic motivation types, classifying academic motivations, and identifying the distinctive traits of each academic motivation type (Le, 2009; Truong et al., 2012; Olagbami, 2013; Nguyen, Du, 2014; Duong, 2015; Dang, 2015; Tran, 2015; Huynh, Nguyen, 2015; Bui, 2015). Research on academic motivation during the online learning process is included in studies on the state of students' academic motivation (Chemsu et al., 2020).

There are studies that look deeply into the factors related to and affecting academic motivation in general as well as each students' particular type of motivation (Tariq, 2011; Hazrati-Viari et al., 2012; Cigan, 2014; Massari, 2014; Luu, 2015; Ferguson, 2017; Litalien et al., 2017; Raza, Shah, 2017; Wang et al., 2017). There are studies on trials and recommendations for development strategies to promote students' academic motivation (Elliott et al., 2005; Amoura et al., 2015; Tran, 2015; Nguyen, 2015b; Dang, 2015; Nguyen, 2017; Fatima et al., 2018; Stolk et al., 2018).

Several studies have been conducted on students' academic motivation in various majors; these studies explore the current situation, take into account and examine the variables that have an influence on students' academic motivation in the unique training setting of each major (computer science, communication science, police training, teacher training, political training, tourism training, military training, law enforcement training (Herman, 2012; Nguyen, 2015b; Nguyen, 2015c; Luu, 2015; Manh, 2015; Nguyen et al., 2015; Tran, 2015a; Huynh, Nguyen, 2015; Ferguson, 2017; Zhang et al., 2017). In addition, there are a number of studies on the influence of students' academic motivation and learning attitudes on their own learning results (Elliott et al., 2005; Taylor et al., 2014; Luu, 2015; Nguyen et al., 2015; Bui, 2017; Zhang et al., 2017).

A few in-depth researches on the status of learning motivation in pedagogical students, the elements that shape and develop it, and the significance of learning motivation for pedagogical students of various majors have been conducted both internationally and in Vietnam (Massari, 2014; Rafailă, 2014; Bezverkhnya, Mayevsky, 2015; Nguyen, Pham, 2015; Ivanova et al., 2017; Yarmakeev et al., 2021; Yatsenko et al., 2021). Furthermore, studies on the learning motivation of graduate/level master's pedagogical students are also available (Massari, 2014).

The quality of general education depends on many different objective and subjective factors, in which the pedagogical capacity of teachers in education and teaching for students is a fundamental factor; teachers' pedagogical capacity is formed and developed mainly at the stage when they are trained in a pedagogical environment. However, in reality today, there are also many pedagogical students who, while enrolled in school, do not have specific learning objectives and are not particularly interested in pedagogy. In addition, there are many students who do love pedagogy, take initiative, put forth effort to study independently, are interested in learning, and develop themselves to become future teachers. Because of objective requirements, some students actively study, but in reality, they are still passive, lack self-control, aren't particularly creative or enthusiastic, and lack self-discipline in learning, and self-training activities (Massari, 2014; Rafailă, 2014; Bezverkhnya, Mayevsky, 2015; Nguyen, Pham, 2015; Ivanova et al., 2017; Yarmakeev et al., 2021; Yatsenko et al., 2021). Specifically, 67.8 % of first-year pedagogical students at Hue

University of Education are not interested in studying in class, skip lessons, and skip classes (Phi, 2012). First-year students at Can Tho University have lower self-study ability than university requirements, especially when it comes to the actual academic credit policy of the university (Truong et al., 2012). In addition, a study on students at 08 universities in Hanoi showed that 16.39 % of students procrastinate studying "regularly" and 11.82 % of students in that study "always" procrastinate.

Vietnam is promoting a reform of general education (K–12), giving high priority to a number of objectives, including the promotion of vocational education for high school students (K–12), a field that has not seen significant development or efficient instruction in a long time (Ministry of Education and Training, 2018a). Vietnam's educational innovation now depends directly on the quality of teacher training in pedagogical schools; because they are the future teachers who are responsible for educating students in general and orienting their careers for students in particular (Vietnam Psycho-Pedagogical Association, 2015; Ministry of Education and Training, 2018). Therefore, there is a need for understanding the reality of the diverse learning motivational spectrum of pedagogical students who are future teachers to have evidence of strengths and weaknesses, along with the specific socio-demographic characteristics of students. Pedagogical students, on that basis, need to develop training and intervention plans and programs to improve self-learning motivation (intrinsic motivation, learning interest), and to form active learning habits, which is a really urgent study. This research will contribute to promoting the quality of pedagogical teacher training and the quality of general education in Vietnam in general.

The study aims to determine how pedagogical freshmen show academic motivation based on the academic motivation continuum, and which type of academic motivation is most clearly and strongly articulated. Simultaneously, it intends to investigate the link between academic motivations on the academic motivation continuum, as well as the differences in the expression of academic motivation based on various demographic characteristics. On the analysis and discussion of the actual findings, further research directions and a number of ways to generate autonomous and intrinsic academic motivation for pedagogical freshmen shall be proposed.

In this study, we hypothesize that: (1) the majority of pedagogical freshmen have lower IAM than EAM; (2) different aspects of IAM are associated with each other, as are aspects of EAM; (3) there are differences in the aspects of IAM as well as EAM by gender, academic major, academic level, family economic status, and parental style; and (4) there is a certain percentage of academically amotivated students who require timely attention, intervention/support.

2. Materials and methods

Research Design

The study is a cross-sectional research design where an online questionnaire was used with particular attention towards examining the first-year students' academic motivation. The University gave the approval for collecting data and conducting the study. All the subjects took part in this quantitative study voluntarily. Due to COVID-19 and social distancing, students answered the questionnaire via Google form in the order of demographics (age, gender, major, class, phone number, high school academic ranking, family economic status, parenting styles), and academic motivation scale.

Research sample

The study was conducted on a total of 892 pedagogical freshmen. The students are from a public National University of Education located in Hanoi, which is the largest teacher training university in Vietnam. All participants are recruited through a convenient sampling method.

There were no exclusions for any reason. In accordance with the APA's ethical guidelines, all respondents were voluntary and informed consent was obtained.

The specific characteristic of the pedagogical students is that the number of females is greater than males, and pedagogical students are recruited from all over the country. In the sample, the number of students in the natural science major is fairly large, with 533 freshmen (415 females, 116 males, and 02 others). This major usually has a larger proportion of men compared to social science. Social science has 359 first-year students (340 females, 19 males). In this convenient sample group, Students majoring in social science study the following branches: educational psychology, special education, early childhood, history, literature, Vietnamese studies, French pedagogy, music, primary school, and civic education, while students majoring in natural science

study chemistry, physics, math, information technology, and biology. For comparative statistical analysis, the group of parenting styles below 35 samples shall be excluded.

Table 1. The research samples (n = 892)

Characteristics		N	%
Gender	Male	135	15.1
	Female	755	84.6
	Other	02	0.2
Age	1995 (27 years old)	02	0.2
	1998 (24 years old)	02	0.2
	1999 (23 years old)	02	0.2
	2000 (22 years old)	05	0.6
	2001 (21 years old)	14	1.6
	2002 (20 years old)	46	5.2
	2003 (19 years old)	821	92
Academic level	High distinction	563	63.1
	Distinction, Credit & Pass	329	36.9
Academic major	Natural science	533	59.8
	Social science	359	40.2
Family economic status	High and upper middle income	279	31.3
	Middle income	551	61.8
	Lower middle and low income	62	7.0
Parenting style	Authoritative	770	86.3
	Authoritarian	60	6.7
	Permissive	35	3.9
	Uninvolved	27	3.0

Research tools

The questionnaire was inherited from research on the Vietnamese version of the Academic Motivation Scale (Nguyen, Nguyen, 2019). They developed the scale based on the Academic Motivation Scale by Vallerand et al (1992) following self-determination theory (Vallerand et al., 1992). There are a total of 28 items, of which 12 items are under IAM, 12 items are under EAM, and 4 items are under academic amotivation. The researchers tested 341 university students and showed highly reliable subscales, with Cronbach's alpha ranging from 0.80 to 0.87 (Nguyen, Nguyen, 2019).

The questionnaire we used was tested to determine the comprehension of the items by a group of 45 university students. We reconciled the problematic items according to a large number of students. Regarding reliability, the first item "Because with only a high-school degree I would not find a high-paying job later on" was removed due to the low level of item-total correlation ($\alpha = 0.291 < 0.3$). We deliberately decided to do so because removing this item improves the scale's internal consistency. It was explained that this item was built in the negative orientation while the remainder of the subscale had a positive structure (Nguyen, Nguyen, 2019). Furthermore, Nguyen & Nguyen suggested that students could evaluate this item based on Vietnamese social conception with the overemphasis on having a good job with a university degree rather than on their personal status. As a result, 27 items were accepted for the official survey. The questionnaire employed a 7-point Likert scale (from point 1 = does not correspond at all to point 7 = corresponds at all).

The data from our official survey demonstrated that an item was removed because it did not meet the criteria of reliability (Item-total correlation of < 0.3); the remaining items on academic motivation are shown in Table 2. The guaranteed reliability of the Academic Motivation Scale was indicated. The remaining 12 items reflect IAM. Eleven items reflect EAM and 4 items reflect amotivation.

Table 2. Reliability of the scales (n = 892)

Academic Motivation scales	Items	Cronbach's alpha
Intrinsic Academic motivation	12	0.921
IAM-to know	04	0.814
IAM-toward accomplishment	04	0.812
IAM-to experience stimulation	04	0.806
Extrinsic Academic motivation	11	0.869
EAM-identified regulation	04	0.772
EAM-introjected regulation	04	0.798
EAM-external regulation	03	0.749
Amotivation	04	0.836

In addition to the official questionnaire on academic motivation, there are 07 other items asking about: gender, high school performance, academic major, age, parenting styles, family economic status and phone number. Overall, this is an anonymous questionnaire; therefore, students are not affected by the requirement to disclose their identities.

Statistical Analysis

The research data was compiled by utilizing the Statistical Package for Social Sciences. In this study, Cronbach's Alpha was employed to examine the validity (convergence and discrimination) and reliability of the scales. Statistical parameters such as mean and standard deviation were calculated to describe the current status of students' different academic motivations. The Pearson correlation was calculated to analyze the relationship between different aspects of intrinsic motivation and the correlation among extrinsic motivation's various regulations. T-test and One-way ANOVA were also applied to compare the intrinsic and extrinsic academic motivation as well as amotivation regarding demographic characteristics.

3. Results

Intrinsic academic motivation of pedagogical freshmen

The intrinsic academic motivation of the first-year pedagogical students is presented in [Table 3](#).

Table 3. General descriptive analysis of intrinsic academic motivation

	M	SD
Intrinsic academic motivation	5.37	1
IAM-to know	5.75	1.01
IAM-toward accomplishment	5.15	1.19
IAM-to experience stimulation	5.20	1.09

Note: N = 892, Min = 1 (does not correspond at all), Max = 7 (corresponds at all)

The IAM and three IAM aspects have average scores ranging from 5.15 to 5.75, all of which are in the range of corresponding a lot to the reasons why students go to college and further. The self-reported IAM of the pedagogical freshmen is average in general and in each specific aspect. Considering the three aspects of intrinsic motivation, first-year students mostly tend to learn to know (M = 5.75), followed by learning to experience stimulation, and learning toward accomplishment is the lowest motivation. This proves that freshmen mainly participate in learning activities with a mindset of exploring new things. In other words, they enjoy discovering their favorite topics and expanding their knowledge of interesting things. They also study because they have positive feelings about learning, find the materials and lesson content attractive, have positive emotions when sharing ideas with teachers, friends, and everyone else, and have fun when participating in academic projects. Lastly, the motivation of trying to excel and achieve a new standard, especially learning to achieve high goals and surpass themselves in class, is not as strong

as students' motivation to learn new things. They do not really learn to get results, achieve their goals, or see changes in their own learning progress.

IAM is analyzed according to 3 aspects: learning to know, learning toward accomplishment, and learning to experience stimulation. Each specific expression of university students is also evaluated and presented in [Table 4](#).

In the aspect of IAM-to know, the average score of each item is from 5.64 to 5.86, all of which are in the range of corresponding a lot or higher; in which students show the highest expression is going to university because of joy and satisfaction when learning new things (M = 5.86), followed by going to school because of excitement when discovering new things and learning the things they are passionate about.

In terms of IAM-toward accomplishment, the average score of each item is from 4.79 to 5.49, ranging from corresponding moderately to corresponding a lot; in which the item with the highest expression is going to school because freshmen feel happy when they surpass themselves to achieve their learning goals (M = 5.49), followed by going to school because of pleasure when they excel to conquer subjects. The lowest expression is schooling due to satisfaction when achieving difficult goals in learning (M = 4.79).

The average score for each item in the category of IAM-to experience stimulation ranges from 4.93 to 5.54, with a range of corresponding moderately to corresponding a lot ([Figure 1](#)). The lowest expression is attending school because they enjoy the sensation of being drawn to knowledge (M = 4.93), and the highest expression is because they are excited to learn their favorite subjects and read about their best-loved topics (M = 5.54) as well as to share and discuss their fresh insights and viewpoints with others (M = 5.25).

Thus, the overall findings indicate that students who are intrinsically motivated to learn, go to school primarily because they enjoy learning new things, are thrilled to discover new things, are learning about topics they are interested in, and because they are happy when they surpass their own expectations to complete their studies and master all subjects. Few students attend school for the satisfaction of achieving challenging academic goals, for the love of learning, for the contentment of achieving challenging academic goals, or for the pleasure of excelling in their academic subjects.

Table 4. Expression of pedagogical freshmen's intrinsic academic motivation

Intrinsic academic motivation	M	SD
Intrinsic academic motivation-to know	5.75	1.01
2. Because I experience pleasure and satisfaction while learning new things.	5.86	1.19
9. For the pleasure I experience when I discover new things never seen before.	5.73	1.22
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	5.64	1.31
23. Because my studies allow me to continue to learn about many things that interest me.	5.75	1.31
Intrinsic academic motivation-toward accomplishment	5.15	1.19
6. For the pleasure I experience while surpassing myself in my studies.	5.26	1.42
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	5.49	1.38
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	4.79	1.53
27. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.	5.05	1.59
Intrinsic academic motivation-to experience stimulation	5.2	1.09
4. For the intense feelings I experience when I am communicating my own ideas to others.	5.25	1.36
11. For the pleasure that I experience when I read interesting authors.	5.09	1.4
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	4.93	1.42

25. For the "high" feeling that I experience while reading about various interesting subjects. 5.54 1.3

N = 892, Min = 1 (does not correspond at all), Max = 7 (corresponds at all)

The Pearson correlation coefficient analysis demonstrates positive relationships among three aspects of IAM.

Table 5. Correlation between aspects of intrinsic academic motivation

	(1)	(2)	(3)
(1) Intrinsic academic motivation-to know	-		
(2) Intrinsic academic motivation-toward accomplishment	0,73**	-	
(3) Intrinsic academic motivation-to experience stimulation	0,8**	0,76**	-

Note: **: p<0,001

Specifically, learning to know and learning to experience stimulation are most positively correlated ($r = 0.8$; $p < 0.001$). Learning toward accomplishment and learning to experience stimulation also had a significant linear relationship. The two components of studying to know new topics and learning to experience stimulation are also positively correlated. Therefore, the more a freshman learns to understand more new things, the more she/he wants to find joy and positive emotions while participating in interesting learning projects, and the more she/he wants to learn to surpass himself and achieve in her/his studies.

Extrinsic academic motivation of pedagogical freshmen

Table 4 presents the extrinsic academic motivation and three types of regulations on the first-year pedagogical students.

Table 6. General descriptive analysis of extrinsic academic motivation

	M	SD
Extrinsic academic motivation	5.76	0.88
Extrinsic academic motivation-identified regulation	6.0	0.9
Extrinsic academic motivation-introjected regulation	5.31	1.24
Extrinsic academic motivation-external regulation	5.98	1.03

Note: N = 892, Min = 1 (does not correspond at all), Max = 7 (corresponds at all)

The average score of freshmen's EAM is from 5.31 to 6.0, all of which are in the range of corresponding a lot and above. The identified regulation is currently their strongest motivation (M = 6.0; SD = 0.9). It indicates that first year students have certain learning orientations and understand that studying will improve their ability and give them the opportunity to find favorite jobs and enter their appropriate career paths. This is also an advantage that makes it easier and more convenient for students to transform their extrinsic motivation into intrinsic motivation. Although there is a need for further education to develop this type of motivation, if too much emphasis is placed on this regulation, students will probably experience high self-pressure. Students' external regulation is also quite a strong motivation for pedagogical freshmen. In other words, many freshmen learn because they absolutely want to have well-thought-of jobs with excellent salaries and generally good lives. Among three types of regulations, extrinsic motivation (introjected regulation) is the weakest motivation. That means there are a number of freshmen who are not just wanting to assert their own learning ability, academic success, or intelligence, or to be important people to themselves.

Specific manifestations of 3 aspects of external learning motivation are summarized in Table 7.

In the identified regulation, the average score ranges from 5.76 to 6.19, equating to corresponding a lot and more. The majority of students who have this type of motivation go to

school because they feel it will help them prepare for their chosen career (M = 6.19), followed by their belief that it will improve their working competence (M = 5.98).

In the introjected regulation, the average score is from 4.84 to 5.54, ranging from corresponding moderately to corresponding a lot. Most freshmen attend school to demonstrate their ability to succeed in their studies (M = 5.54) and to feel valued when they study well (M = 5.47). Their weakest expression of attending the university is to prove that they can complete their college degree (M = 4.84)

In the external regulation, the average score is between 5.76 and 6.29, within the range of corresponding a lot and above. The majority of students go to school because they want to have a secure existence in the future (M = 6.29), solid pay at a later date (M = 5.89) and to have a prestigious job (M = 5.76).

Overall, students with EAM attend college primarily to ensure a stable future life, be well equipped for their chosen job, earn a decent wage, and improve their working productivity and have a valued job. Not many students go to college because doing well in studies makes them feel worthwhile or proves their ability to do so.

Table 7. Expression of pedagogical freshmen’s extrinsic academic motivation

Extrinsic academic motivation	M	SD
Extrinsic academic motivation-identified regulation		
3. Because I think that a college education will help me better prepare for the career I have chosen.	6.19	1.02
10. Because eventually it will enable me to enter the job market in a field that I like.	5.76	1.36
17. Because this will help me make a better choice regarding my career orientation.	5.98	1.17
24. Because I believe that a few additional years of education will improve my competence as a worker.	6.08	1.09
Extrinsic academic motivation-introjected regulation		
7. To prove to myself that I am capable of completing my college degree.	4.84	1.87
14. Because of the fact that when I succeed in college I feel important.	5.47	1.44
21. To show myself that I am an intelligent person.	5.39	1.45
28. Because I want to show myself that I can succeed in my studies.	5.54	1.48
Extrinsic academic motivation-external regulation		
8. In order to obtain a more prestigious job later on	5.76	1.44
15. Because I want to have "the good life" later on	6.29	1.06
22. In order to have a better salary later on.	5.89	1.26

Note: N = 892, Min = 1 (does not correspond at all), Max = 7 (corresponds at all)

The Pearson correlation coefficient was computed to assess the linear relationships between students’ identified regulation and introjected regulation, between identified regulation and external regulation as well as between introjected regulation and external regulation.

Table 8. Correlation between aspects of extrinsic academic motivation

	(1)	(2)	(3)
(1) Extrinsic academic motivation-identified regulation	-		
(2) Extrinsic academic motivation-introjected regulation	0,56**	-	
(3) Extrinsic academic motivation-external regulation	0,54**	0,55**	-

Note: **: p<0,001

There were three positive correlations between each pair of variables. They showed statistically significant but moderately weak correlations. Freshmen’s higher motivation of preparing better for their chosen career, improving their ability as a working adult, and making

better career-related decisions does not strongly guarantee the higher motivation of having a higher salary, a good life, and being respected. Also, the stronger identified regulation and external regulation does not guarantee the stronger motivation of proving oneself as a successful and intelligent, highly capable person.

Academic amotivation of pedagogical freshmen

The first-year students' academic amotivation is low ($M = 2.16$, $SD = 1.29$). There are five students with the highest scores, accounting for only 0.56 % of the total research sample. It shows that the number of students without academic motivation is extremely small. There are also 42 freshmen who showed their high level of amotivation with scores ranging from 5 to 6.75. This group of participants accounts for 4.28 % of the total subjects.

Although it is a small number, some students lose the meaning of going to university which they used to have. There are also students who do not have a reason and purpose for going to college and they ignore it. These are the students that need to be focused and strengthened so that they can see the meaning of learning and gradually form IAM.

The results of the amotivation of the sample group are summarized in [Table 9](#). The average score is from 1.9 to 2.7, which is in the range of corresponding a little. The most obvious manifestation of students' lack of academic motivation is whether they should continue studying at university even though there was a reason to study. Some students are not motivated to study because they don't understand why they go to college, don't care and feel like they're wasting their time in college.

Table 9. Expression of pedagogical freshmen's academic amotivation

Academic amotivation	M	SD
5. Honestly, I don't know; I really feel that I am wasting my time in school.	1.93	1.37
12. I once had good reasons for going to college; however, now I wonder whether I should continue	2.74	1.85
19. I can't see why I go to college and frankly, I couldn't care less.	1.99	1.56
26. I don't know; I can't understand what I am doing in school.	1.97	1.51

Note: $N = 892$, $Min = 1$ (does not correspond at all), $Max = 7$ (corresponds at all)

General review of freshmen's motivation

[Table 10](#) shows that the majority of first-year pedagogical students have an IAM (accounting for 67.7 %) and an EAM (accounting for 54.4 %) at an average level. The percentage of freshmen with low intrinsic and extrinsic academic motivation is very small, accounting for only 1.8 % and 0.8%, respectively. These numbers show that students in the survey group always have at least some motivation for participating in learning activities.

This study's overall findings are similar to those for 349 pedagogical students from Hung Vuong University, Phu Tho ([Bui, 2015](#)), as well as research findings on students from many other universities, including Ho Chi Minh City University of Technology, Saigon University, Dong Thap University, University of Engineering and Logistics-People's Public Security, and Hong Duc University ([Duong, 2015](#); [Dang, 2015](#); [Nguyen et al., 2015](#); [Huynh, Nguyen, 2015](#)).

Table 10. Distribution of academic motivation by score range

Score Range	IAM (%)	EAM (%)	Amotivation (%)
Low (≤ 3)	1.8	0.8	82.2
Average (3.01-5.99)	67.7	54.4	15.7
High (6-7)	30.5	44.8	2.1

In [Table 11](#), 45.9 % of the students have the same average level of intrinsic and extrinsic academic motivation. Nearly a quarter of the students simultaneously have high intrinsic and extrinsic academic motivation. The percentage of students with almost no motivation is at a very low level of 0.6 %. There are 67 students whose intrinsic motivation is superior to their extrinsic

motivation (accounting for 7.5 %) and 205 students whose EAM is superior to their IAM (accounting for 22.9 %).

Table 11. Cross-compare intrinsic academic motivation with extrinsic academic motivation

			Intrinsic academic motivation			Total
			Low	Average	High	
Extrinsic academic motivation	Low	N	5	1	1	7
		%	0.6 %	0.1 %	0.1 %	0.8 %
	Average	N	11	409	65	485
		%	1.2 %	45.9 %	7.3 %	54.4 %
	High	N	0	194	206	400
		%	0.0 %	21.7 %	23.1 %	44.8 %
Total	N	16	604	272	892	
	%	1.8 %	67.7 %	30.5 %	100.0 %	

Academic motivation by demographic characteristics

Frequency analysis of demographic characteristics showed a big difference in the two genders, two academic majors, two academic levels, and four parenting styles. Therefore, we only studied the academic motivation of male and female students separately; students majoring in natural sciences and students majoring in social sciences separately; students with high and students with distinction, credit and pass separately; students from high and upper middle income families, students from middle income families, as well as students from lower middle and low income families separately; students having authoritative parents, students having authoritarian parents, students having permissive parents, and students having uninvolved parents separately.

Gender

The results of the students' expression of their intrinsic motivation, extrinsic motivation, and amotivation by gender are summarized in [Table 12](#).

Table 12. Freshmen’s academic motivation by gender

	Gender	M	SD	T	p
Intrinsic academic motivation	Male	5.34	1.12	-0.28	0.78
	Female	5.37	0.98		
IAM-to know	Male	5.75	1.08	0.22	0.98
	Female	5.75	1.00		
IAM-toward accomplishment	Male	5.04	1.40	0.01	0.25
	Female	5.17	1.14		
IAM-to experience stimulation	Male	5.24	1.13	0.57	0.65
	Female	5.19	1.08		
Extrinsic academic motivation	Male	5.53	0.98	-3.41	0.001
	Female	5.81	0.86		
EAM-Identified regulation	Male	5.87	0.94	-1.85	0.06
	Female	6.02	0.89		
EAM-Introjected regulation	Male	4.96	1.45	-3.65	0.000
	Female	5.38	1.19		
EAM-External regulation	Male	5.76	1.12	-2.76	0.006
	Female	6.02	1.01		
Academic amotivation	Male	2.37	1.45	2.1	0.04
	Female	2.12	1.26		

Both males and females have higher EAM than IAM. Among three aspects of IAM, male and female freshmen have the highest IAM-to know ($M = 5.75$). On the motivation continuum, male students have the highest EAM-identified regulation and female students have the highest EAM-identified regulation and external regulation. Male students have the lowest EAM-introjected regulation ($M = 4.96$). Female students have the lowest IAM-toward accomplishment ($M = 5.17$). There is only a difference between female and males' motivation. Female students have higher EAM than male students. Particularly, female students have stronger introjected regulation and external regulation than the males. There is no difference between the genders regarding other types of motivation.

Academic major

Table 13 presents the findings of the analysis of freshmen's academic motivation by academic major in the social sciences and natural sciences.

Table 13. Freshmen's academic motivation by major

	Majors	M	SD	T	p
Intrinsic academic motivation	Natural Science	5.34	1.00	-0.79	0.43
	Social Science	5.40	1.01		
IAM-to know	Natural Science	5.71	1.00	-1.44	0.15
	Social Science	5.81	1.03		
IAM-toward accomplishment	Natural Science	5.13	1.20	-0.49	0.62
	Social Science	5.17	1.16		
IAM-to experience stimulation	Natural Science	5.19	1.07	-0.31	0.76
	Social Science	5.22	1.12		
Extrinsic academic motivation	Natural Science	5.74	.85	-1.11	0.27
	Social Science	5.80	.93		
EAM-Identified regulation	Natural Science	5.99	.86	-0.4	0.69
	Social Science	6.01	.95		
EAM-Introjected regulation	Natural Science	5.22	1.25	-2.64	0.008
	Social Science	5.44	1.22		
EAM-External regulation	Natural Science	6.00	.98	0.66	0.51
	Social Science	5.95	1.10		
Academic amotivation	Natural Science	2.13	1.29	-0.82	0.41
	Social Science	2.2	1.3		

Freshmen in natural science and social science both have stronger EAM than IAM. Among three aspects of IAM, motivation to know is the most powerful motive of students in both majors. In the continuum of motivation, students of natural science learn mainly due to EAM-external regulation ($M = 6$; $SD = 0.98$) and students of social science learn mostly due to EAM-identified regulation ($M = 6.01$; $SD = 0.95$). Students in the two majors possess the weakest IAM-toward accomplishment. There is no difference between students' different types of motivation in both majors ($p > 0.05$) except EAM-Introjected regulation. Students in social science have stronger introjected regulation than those in natural science.

Academic level

Table 14 summarizes the analysis results of the expression of academic motivation by student's educational level.

Table 14. Freshmen's academic motivation by academic level

	Academic level	M	SD	T	p
Intrinsic academic motivation	High distinction	5.41	1.00	1.75	0.08
	Distinction, Credit & Pass	5.29	1.01		

IAM-to know	High distinction	5.77	1.00	0.83	0.41
	Distinction, Credit & Pass	5.71	1.03		
IAM-toward accomplishment	High distinction	5.20	1.18	1.6	0.11
	Distinction, Credit & Pass	5.07	1.19		
IAM-to experience stimulation	High distinction	5.27	1.08	2.32	0.02
	Distinction, Credit & Pass	5.09	1.10		
Extrinsic academic motivation	High distinction	5.80	.84	1.64	0.1
	Distinction, Credit & Pass	5.70	.95		
EAM-Identified regulation	High distinction	6.04	.85	1.84	0.07
	Distinction, Credit & Pass	5.93	.97		
EAM-Introjected regulation	High distinction	5.30	1.24	-0.33	0.74
	Distinction, Credit & Pass	5.33	1.24		
EAM-External regulation	High distinction	6.06	.98	3.04	0.002
	Distinction, Credit & Pass	5.84	1.10		
Academic amotivation	High distinction	2.10	1.24	-1.72	0.09
	Distinction, Credit & Pass	2.26	1.37		

Freshmen at different academic levels all have greater EAM than IAM. Among three aspects of IAM, motivation to know is the most powerful motive of students at different academic levels. On the motivation continuum, freshmen with high distinction study mainly due to EAM-external regulation (M = 6.06; SD = 0.98) and students with distinction, credit and pass learn mostly due to EAM-identified regulation (M = 5.93; SD = 0.97). Students at all academic levels possess the weakest IAM-toward accomplishment. There is a statistical difference of students' motivation having dissimilar academic levels regarding IAM-to experience stimulation and EAM-external regulation. In other words, high distinction freshmen have higher IAM-to experience stimulation and EAM-external regulation than students at other academic levels.

Family economic status

The analysis of freshmen's academic motivation from families with various economic circumstances is summarized in [Table 15](#).

Table 15. Freshmen's academic motivation by family economic status

	Family economic status	M	SD	F	p	Comparison
Intrinsic academic motivation	M1	5.52	0.96	6.6	0.001	M1 > M2; M2 = M3; M1 > M3
	M2	5.32	1.00			
	M3	5.06	1.13			
IAM-to know	M1	5.90	0.95	6.57	0.001	M1 > M2; M2 = M3; M1 > M3
	M2	5.70	1.02			
	M3	5.46	1.07			
IAM-toward accomplishment	M1	5.31	1.15	5.47	0.004	M1 > M2; M2 = M3; M1 > M3
	M2	5.10	1.17			
	M3	4.82	1.37			
IAM-to experience stimulation	M1	5.33	1.04	4.8	0.008	M1 = M2 = M3
	M2	5.17	1.08			
	M3	4.89	1.27			
Extrinsic academic motivation	M1	5.90	0.80	6.09	0.002	M1 > M2; M2 = M3; M1 > M3
	M2	5.72	0.90			
	M3	5.53	1.01			
EAM-identified	M1	6.11	0.79	4.53	0.11	M1 = M2 = M3

regulation	M2	5.97	0.91	3.88	0.21	M1 = M2 = M3
	M3	5.77	1.18			
	M1	5.47	1.21			
EAM-introjected regulation	M2	5.25	1.24	4.64	0.01	M1 = M2; M2 = M3; M1 > M3
	M3	5.10	1.29			
	M1	6.11	0.94			
EAM-external regulation	M2	5.94	1.05	2.74	0.07	M1 = M2 = M3
	M3	5.73	1.14			
	M1	2.07	1.33			
Academic amotivation	M2	2.17	1.26			
	M3	2.49	1.36			
	M1					

Note: M1 = High and upper middle income; M2 = Middle income; M3 = Lower middle and low income

Freshmen from different family economic situations all have better EAM than IAM. Among three aspects of IAM, motivation to know is the most powerful motive of students coming from different families. In the continuum of motivation, EAM-external regulation (M = 6.11; SD = 0.94) and EAM-identified regulation (M = 6.11; SD = 0.94) are the strongest motivation of students from the high and upper middle income families. EAM-identified regulation is the greatest motivation of students from middle income families (M = 5.97; SD = 0.91). EAM-identified regulation is also the greatest motivation of students from lower middle- and low-income families (M = 5.77; SD = 1.18). Regardless of family economic circumstances, freshmen have the lowest level of IAM-toward accomplishment.

Parenting styles

Table 16 presents the findings from examining how students from various parental style groups expressed their academic motivation.

Table 16. Freshmen’s academic motivation by parenting styles

	Parenting styles	N	M	SD	F	P	Comparison
Intrinsic academic motivation	M1	770	5.39	0.99	0.73	0.48	M1 = M2 = M3
	M2	60	5.24	1.01			
	M3	35	5.30	1.07			
IAM-to know	M1	770	5.77	0.99	1.07	0.34	M1 = M2 = M3
	M2	60	5.58	1.08			
	M3	35	5.82	0.98			
IAM-toward accomplishment	M1	770	5.18	1.17	0.97	0.38	M1 = M2 = M3
	M2	60	4.96	1.23			
	M3	35	5.14	1.27			
IAM-to experience stimulation	M1	770	5.23	1.07	1.12	0.33	M1 = M2 = M3
	M2	60	5.18	1.05			
	M3	35	4.95	1.32			
Extrinsic academic motivation	M1	770	5.78	0.86	0.64	0.53	M1 = M2 = M3
	M2	60	5.66	0.99			
	M3	35	5.83	0.87			
EAM-identified regulation	M1	770	6.03	0.87	1.93	0.15	M1 = M2 = M3
	M2	60	5.84	1.05			
	M3	35	5.84	1.04			
EAM-introjected	M1	770	5.32	1.24	0.56	0.57	M1 = M2 = M3
	M2	60	5.23	1.28			

regulation	M3	35	5.51	1.05			
EAM-external regulation	M1	770	6.00	1.01	0.59	0.55	M1 = M2 = M3
	M2	60	5.90	1.05			
	M3	35	6.13	1.01			
Academic amotivation	M1	770	2.11	1.29	4.32	0.01	M1 > M2;
	M2	60	2.6	1.36			M2 = M3;
	M3	35	2.03	0.82			M1 = M3

Note: M1 = Authoritative, M2 = Authoritarian, M3 = Permissive, M4 = Uninvolved

Students being raised in families with different parenting styles all have stronger EAM than IAM. Among three aspects of IAM, they all have the highest IAM-to know. In the continuum of motivation, EAM-identified regulation is the greatest motivation of students having authoritative parents ($M = 6.03$; $SD = 0.87$) and students having uninvolved parents ($M = 5.71$; $SD = 1.19$). EAM-external regulation is the highest motivation of students having authoritarian parents ($M = 5.9$; $SD = 1.05$) and of students having permissive parents ($M = 6.13$; $SD = 1.01$). IAM-toward accomplishment is the weakest motivation of students having authoritative parents ($M = 5.18$; $SD = 1.17$), authoritarian parents ($M = 4.96$; $SD = 1.23$) and uninvolved parents ($M = 4.67$; $SD = 1.34$). IAM-to experience stimulation is the lowest motivation of students having permissive parents ($M = 4.95$; $SD = 1.32$).

In short, pedagogical students have the greater EAM than IAM and IAM-to know is the strongest aspect among three aspects of motivation regardless of sociodemographic characteristics. IAM-toward accomplishment is many students' weakest motivation of different socio-demographic characteristics (female, majors, academic levels, authoritative parenting style, authoritarian parenting style, uninvolved parenting style).

4. Discussion

This study was carried out on a sample of 892 first-year pedagogical students with the aim of deeply understanding the current status of the student's academic motivation continuum, including EAM, IAM and amotivation, by analyzing the correlation between expression aspects of each type of first-year students' academic motivation and investigating academic motivation according to social-demographic aspects such as age, gender, academic levels, socioeconomic status, and parenting style. The research findings shall serve as the basis/evidence for strategies for enhancing academic motivation of the first-year pedagogical students, while also assisting in the development of further research with the capacity of proposing educational, intervention and improvement measures for pedagogical students' academic motivation.

Overall, freshmen's EAM is higher than IAM, in which there are a large number of students having an average to high score of EAM. This is similar to the previous research results in a few universities in Vietnam (Nguyen, Doan, 2013; Duong, 2015; Dang, 2015; Nguyen et al., 2015; Huynh, Nguyen, 2015; Bui, 2015). This finding also raises the concern that Hanoi National University of Education should consider and have supportive strategies for those with a high score of EAM, especially those with a high score of EAM-introjected regulation and identified regulation, so that they may possess a higher opportunity to gradually transform their motivation to IAM (Le, 2009; Nguyen, Doan, 2013; Bui, 2014; Tran, 2015; Nguyen, 2015b; Hoang, 2015; Dang, 2015; Huynh, Nguyen, 2015).

With the group of students having IAM, they demonstrated that going to school was primarily due to the joy and satisfaction from learning new things, excitement when discovering new things, when learning topics and things they love and for joy when exceeding themselves to achieve learning goals as well as conquering subjects. As numerous studies have shown, it is a positive signal and it is vital to sustain and grow the IAM in these freshmen while also organizing training so that it may develop and spread to other students while participating in learning and working together in groups and in class (Truong et al., 2012; Kertechian, 2018). Moreover, not many students attend school because they are satisfied when achieving difficult goals in learning, because they like to be caught up in knowledge, because they are satisfied when they gradually achieve difficult goals in learning or when they obtain excellent results in all subjects. This outcome

is also consistent with previous research (Luu, 2015; Hoang, 2015). This is the basic limitation to students' IAM in the sample group; these aspects should be evaluated for improvement, with a particular emphasis on pushing students to succeed in each topic, exceeding themselves to accomplish their own full potential (Pham, 2011; Tran, 2015; Nguyen, 2015b; Hoang, 2015; Huynh, Nguyen, 2015).

The results on EMA are comparable to many published studies in that, the majority of students go to school because they want to have a stable future life, to prepare well for their chosen career, and to have a decent wage, improve working skills and have a respected job (Nguyen et al., 2015; Huynh, Nguyen, 2015; Bui, 2015). Few students attend university because achieving well in school makes them feel worthwhile or to demonstrate their ability to attend university (Tuyen, Trang, 2015).

Three aspects of IAM including IA-to know, IAM-toward accomplishment and IAM-to experience stimulation have a positive relationship with each other; and three regulations of EAM such as identified regulation, introjected regulation, and external regulation are also positively correlated with each other (Pham, 2011; Massari, 2014; Tran, 2015; Nguyen, 2015b; Hoang, 2015; Huynh, Nguyen, 2015). Therefore, it is necessary to focus on enhancing weak aspects of academic motivation, meanwhile promoting the strong components of academic motivation.

The study also discovered 42/892 (4.7 %) amotivated students and 05 individuals out of 42 having severe academic motivation problems. These are the students who must be supported, understood, and accompanied in order to determine the causes and intervene in time (such as consultation and/or in-depth counseling) to assist them in developing an appropriate academic motivation or to take up another career option. It is a fact that there are Vietnamese and international studies indicating that amotivated students enrolled in a university due to their family's wishes or pressure. Other explanations in these studies include that freshmen did not pass their preferred school or major or after they entered school, they found that they were no longer interested in the chosen profession, ... hence, they got bored with studying and learned to pass the time (Phi, 2012; Nguyen, Du, 2014; Bui, 2014; Massari, 2014; Nguyen, 2017; Kertechian, 2018).

The most common reason for amotivated students is that they wonder if they should continue to study at university even though they used to have a reason to study. A small number of amotivated students do not understand why they are going to university, do not care or believe they are wasting their time studying at university. In order to intervene directly (with consulting and counseling) for these students, it is necessary to spend time deeply understanding the causes of amotivation in each individual student and to find out the relevant factors and effects on each individual's amotivation. On that basis, appropriate and timely psychological interventions/therapy should be chosen (Nguyen et al., 2015; Nguyen, 2022).

Female students are more extrinsically motivated than male students. Females, in particular, show higher introjected regulation and external regulation than males; this result is consistent with earlier studies (Vallerand et al., 1992; Spittle et al., 2009; Stolk et al., 2018). It is explained that in college, female students connect better and more efficiently than male students (Spittle et al., 2009). One of HNUE's missions is that "HNUE seeks to attract a diverse group of talented students from across the nation and around the world and to educate them to be teachers, lecturers, researchers and scholars in schools, colleges, universities and institutions" (Hanoi National University of Education, 2016). Moreover, the majority of students entering pedagogy are female. As a result, additional research into the factors influencing male and female students' academic motivation, particularly in female students, will aid in the identification and timely resolution of the problem in order to improve academic motivation for both female and male students; and contribute to the implementation of HNUE's mission and vision.

Students from various socioeconomic backgrounds do not study because of IAM-toward achievement. Students in two majors and across all academic levels have the lowest IAM-toward accomplishment. IAM-toward accomplishment is the lowest motivator of many pupils from various socio-demographic backgrounds (female, majors, academic levels, authoritative parenting style, authoritarian parenting style, uninvolved parenting style). This result is in harmony with prior research, which found that only a few students study pedagogy with the motivation to outperform themselves, to make progress, and surpass themselves to attain increasingly challenging goals (Nguyen, Doan, 2013; Nguyen, Nguyen, 2016; Bui, 2016), while this is a very important type of academic motivation-helping students to overcome themselves and develop to their fullest

potential. Therefore, it is necessary to focus on promoting and developing IAM-toward accomplishment (Elliott et al., 2005; Dweck, 2012; Rafailă, 2014; Amoura et al., 2015; Bazelaïs et al., 2018; Tran, 2018; Truong, 2018; Rhew et al., 2018). More research on the manifestation of pedagogical students' academic motivation from other fields, such as physical education, scientific majors, elementary education, early childhood, and so on, is also required. (Massari, 2014; Rafailă, 2014; Bezverkhnya, Mayevsky, 2015; Ivanova et al., 2017; Yarmakeev et al., 2021; Yatsenko et al., 2021).

The research findings on the differences between the various types of students' academic motivation from families with different economic situations show that it is critical to focus on improving the students' IAM-to know and IAM-toward accomplishment for students from low, lower middle, middle, upper middle and high income households. Particularly for freshmen from high and upper middle income families, it is necessary to develop EAM-introjected regulation. Students from middle, lower middle and low income families have the highest expression in EAM-identified regulation; this demonstrates the need for aiding this group of students in fast transferring EAM-identified regulation to the IAM. If there is a smooth transition to IAM in the future, the education quality in this group of students will increase (Rafailă, 2014). In-depth research of variables associated with family economic status and pedagogical students' academic motivation is also required in order to propose the most appropriate and closest suggestions on improving students' academic motivation (Tran, 2011; Le, Bui, 2018).

In general, pedagogical students' IAM is lower than their EAM, which might be due to a variety of objective and subjective factors. When students graduate from high school, career orientation, major selection, and school choice all have a direct impact on academic motivation (Yatsenko et al., 2021). Many studies in Vietnam so far indicate that middle and high school students have a high need for career counseling (Duong, 2020; Vu, Tieu, 2020). According to current research, the majority of high schools in Vietnam are not meeting students' demands for career guidance and advice through counseling and consultation (Le, Bui, 2018; Duong, 2020; Vu, Tieu, 2020). Some research also suggests that pedagogical students' career choice is greatly influenced by the family's orientation, attitude, ambition and desire (Rafailă, 2014; Nguyen, Pham, 2018). Some students choose pedagogy based on their own preferences and interests, but lose interest, the drive to study, study ability, and so on during their school studies (Tran, 2011; Phi, 2012; Nguyen, Nguyen, 2016; Bui, 2016; Pham, 2016).

Future studies on pedagogical students' academic motivation should focus on providing solutions for career counseling and guidance for students who still have doubts about the pedagogical profession. It is necessary to research the form of training, the training program, the method of training pedagogical practice skills, the art of training and the diverse factors affecting the academic motivation continuum of pedagogical students to propose solutions to develop and improve autonomous academic motivation for pedagogical students in an appropriate and sustainable manner (Deci, Ryan, 2000a; Hazrati-Viari et al., 2012; Cigan, 2014; Massari, 2014; Ivanova et al., 2017; Fatima et al., 2018; Kertechian, 2018; Nguyen et al., 2020; Pham, 2020; Ngo, 2020; Le, 2020; Nguyen, 2020; Yarmakeev et al., 2021). Furthermore, research is required to address the demands of pedagogy counseling and career advising for middle and high school students who desire to study pedagogy (Tran, 2011; Duong, 2020; Yatsenko et al., 2021). Career counseling must begin as early as childhood or primary school. Vietnam's overarching general education reform program now incorporates vocational education beginning in primary school (Tran, 2010; Ministry of Education and Training, 2018a).

This article was driven by the need for a deeper insight into the sociodemographic features of prospective teachers and current situations that motivate them to study pedagogy. We believe that these empirical data contribute significant new knowledge about the characteristics of individuals who will teach the next generation in Vietnam, specifically their gender, major, academic level, family economic status and parenting styles, and that they advance existing knowledge about the student's current motivation for learning at the Pedagogical University.

However, our research has several limitations. The appraisal of the student's academic motivation is solely based on the analysis of self-reported questionnaire data, with no comparison to the assessment of parents and teachers, or researchers' observations and interviews. In addition, the survey was conducted online due to the Covid pandemic, so it also has certain limitations. Long-term observation, as well as the addition of interview data or case studies, can therefore help this study be deployed on a broader scale and become more accurate.

5. Conclusion

The quality of general education is determined by several elements, one of which is the teachers, therefore paying attention to teacher training is an indispensable link in any educational system (Wang et al., 2017). Many goals are required to achieve high-quality instructors' training and one of which is building academic motivation and sustaining and growing the academic motivation continuum towards autonomy for pedagogical students (Tran, 2011; Tran, 2018; Nguyen et al., 2020; Le, 2020).

From the results of this situation study, the following research directions for developing pedagogical students' academic motivation in Vietnam are suggested: (1) investigating solutions to meet the needs of career counseling and consultation about pedagogy for high school students; (2) studying the model of implementing early career education for high school students, including career guidance in pedagogy; (3) studying the academic motivation continuum and the conversion cycle of pedagogical students' academic motivation on motivation continuum in different school years (sophomore, junior, senior), various majors and related variables (culture, personality, demographics, capacity, interest, training environment, training program, lecturer style, approach to practical training, pedagogical art, teacher's salary, preferential regime of pedagogical students and so on); (4) research on career counseling and consultation strategies for pedagogical students, particularly freshmen, to promptly solve the problem of amotivation or the severely low IAM (Nguyen, 2017); (5) cross-cultural research, comparative examination of pedagogical students' academic motivation among pedagogical students among different countries, industries and cultures. New research directions should be associated with the fundamental and comprehensive innovation orientation of Education and Training of Vietnam (Ministry of Education and Training, 2018b), as well as the vision, mission and goals of HNUE's teacher training (Hanoi National University of Education, 2016).

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