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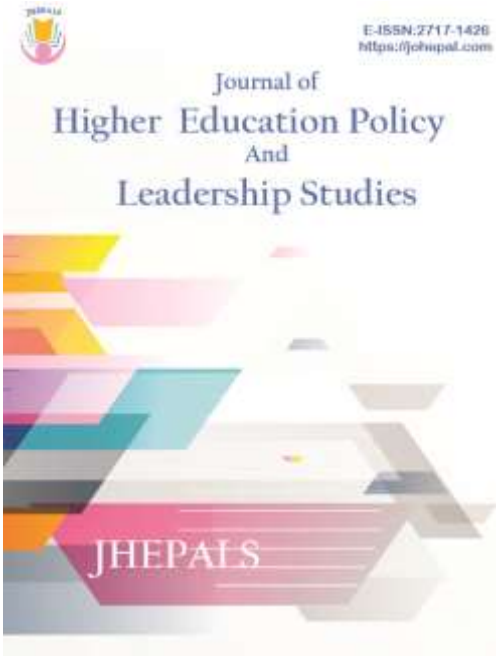

Development and Validation of the Faculty Members' Academic Optimism Inventory (FMAOI)

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Abstract

This study describes the development and validation of an instrument aimed at measuring the faculty's academic optimism in higher education. The data were collected from 211 faculty members who graduated from Iranian, Indian, Australian, United States, and British universities. At first, a question pool was developed to operationalize experts' perceptions about academic optimism in their academic environments. In the second stage, the face and content validity of the scale were examined. Then, a pilot test was deployed to clarify the construct ambit and settled the measure and the meaning of academic optimism, through statistical methods. Then, an exploratory factor analysis was performed on 29 items, followed by a confirmatory factor analysis, which result in an ultimate scale of 23 statements in three factors including professionalism, academic emphasis & collective trust. The Cronbach's alpha coefficient was applied and showed a reliable scale (r= 0.83). The final model represented very good fit (GoF =0.73), and the psychometric properties, such as discriminant, convergent and factorial validity, as well as reliability was assessed. Lastly, the implications of this tool for future research directions are discussed.

Keywords: Academic Optimism; Faculty Efficacy; Inventory Development; Faculty Members; FMAOI

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Introduction

The realization of the university's mission, as well as, the achievement of the university's central functions of teaching, learning, research, and scholarship depend mainly on the faculty members and the internal environment. Therefore, evaluation and paying attention to their traits, attitudes and behaviors are the main areas of academic research. Many researchers believe that behavior in organizations is influenced by organizational culture (e.g. Gorzelany et al, 2021; Elsbach & Stigliani, 2018); and university culture (Kooli et al., 2019) is also affected by trust in own abilities and others as well as positive attitudes for the effective implementation of activities (Shavaran et al., 2012). Over the past years, these concepts have been investigated through different titles such as self-efficacy (Bandura, 2012) and faculty members' trust (Smith & Shoho, 2007; Schwabsky et al., 2020) in educational institutions. Recently, Hoy, Tarter & Woolfolk Hoy (2006) have developed a new scale through the combination of these concepts, namely academic optimism within the school context as a part of optimism culture that can anticipate academic performance in the educational context (Thien et al., 2021).

Hoy and Miskel (2013) argued that "[a]cademic optimism is a collective set of beliefs about the strengths and capabilities in schools that paints a rich picture of human agency in which optimism is the overarching theme that unites efficacy and trust with academic emphasis" (p. 196). If individuals have confidence in their capabilities, they will have a positive judgment about themselves (Dessie & Sewagegn, 2019). This judgment leads to efficacy and has positive effects on their effort, persistence, goal setting, goal commitment, behavior and performance (Fitria, 2018). Trust serves as a fragile agreement between participants orchestrating individual behavior and group order in social endeavors (Tschannen-Moran & Gareis, 2019). Indeed, trust is essential to social functioning (Alazmi & Alenezi, 2020). It abets human survival in a complex world (Smith & Shoho, 2007). Eventually, developing the virtue of optimism presents organizations with the responsibility to promote a culture of hope and optimism (Wicher, 2017). Academic optimism is a positive belief that is also considered to influence the professional success of faculty members (Sezgin & Erdogan, 2015). The culture of an educational organization imbued with such beliefs has a sense of possibility (Hoy & Miskel, 2013).

A large body of research has been initiated and continued on these concepts. However, most of them have been conducted in school contexts and all the researchers have considered this structure as one of the characteristics of schools (Tschannen-Moran & Gareis, 2019). Therefore, the possibility and the extent of its impact on the academic achievement of universities have been less studied. Thus, this study seeks to:

1. Determine the indices and indicators of academic optimism in higher education.
2. Develop and validate a survey instrument to assess university faculty members' academic optimism.

Conceptual Background

Although no validated tool was found to assess the faculty member's academic optimism, the literature concerning this concept has flourished. Theoretically, academic optimism has been drawn from the social capital, social cognitive, and learned optimism theories.

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Eventually, Hoy et al. (2006) developed an instrument to evaluate academic optimism at schools. This scale consists of three components that were considered in the construction of the current tool. Academic optimism is a set of insights and beliefs in the ability and competence through the educational context for breakthrough (Kulophas & Hallinger, 2020). Many elements including efficacy, trust and academic emphasis can form these beliefs. Academic optimism as a whole combines and integrates academic emphasis with trust and efficacy (Woolfolk Hoy, 2019).

The first factor to be considered is efficacy as it creates a positive climate in which the faculty can make an effective change in student learning and belief in their abilities (Hoy & Miskel, 2013). Collective efficacy refers to faculty members' common beliefs about their collective capabilities in achieving educational goals (Kooli, 2019) and preparing students for professional roles and responsibilities (Shavaran et al., 2012). At this level, a culture of efficacy, a collective perception that gives the educational environment a preferable character, is emerged. The same thing that becomes "sources of collective efficacy" if it reaches the group level and the "can-do" attitude placed within the faculty teams". (Donohoo, 2018). Like self-efficacy, collective efficacy is the belief of the group to reach particular task goals (Thien et al., 2021), and enhance academic achievement (Schwabsky et al., 2020). Bandura (2012) suggested four basic sources including mastery experience, vicarious experience, emotional stimulation and social persuasion on which individuals build their self-efficacy. These sources have equal roles in underpinning individual and collective teacher efficacy (Hoy & Miskel, 2013). In their work and activities, individuals interpret the meaning of their actions and use these interpretations to develop their beliefs in their ability to engage in future affairs. Moreover, they form their efficacy beliefs through the vicarious experience of observing the implementation of the acts of others (Kooli, 2019). While individuals learn from vicarious experiences, organizations can also learn by observing other organizations (Kulophas & Hallinger, 2020). Social influence is the effect of the feedback one receives as a result of performing a task (Alazmi & Alenezi, 2020). When the individual successfully completes an activity, others generally offer positive reactions (Woolfolk Hoy, 2019) that can improve the level of efficacy.

Another critical dimension is trust. Smith and Shoho (2007) expanded trust research into higher education. In their viewpoints, the elements of trust at the university include trust in the colleague, dean, and students. Five facets, namely benevolence, reliability, competence, honesty and openness are considered for trust (Woolfolk Hoy, 2019). Therefore, faculty trust in universities is defined by three factors: collegial trust evaluates the level of the faculty's trust in colleagues; trust in students measured the extent of their trust in students, and trust in the dean refers to the degree of trust in their dean of the college (Smith & Shoho, 2007). Trust in schools is important because of its facilitating role in collaboration (Schwabsky et al., 2020). Trust means an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open (Tschannen – Moran, 2017). Since trust is an essential element in creating positive interpersonal communication (Yin & Zheng, 2018) and a healthy learning environment (Tschannen-Moran & Gareis, 2019), it may be overlooked in the organizational climate and culture (Donohoo, 2018). Faculty trust is a collective feature that the faculty as a group is willing to face challenges (Tschannen – Moran, 2017).

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Faculty Members' Academic Optimism Inventory (FMAOI)

The final dimension to be considered is academic emphasis. Academic emphasis or academic press is the extent that the academic achievement is the main goal of the school's environment. A learning environment with high academic emphasis is seeking academic excellence (Tschannen-Moran & Gareis, 2019). A set of achievable goals is approved for participants and the faculty pay attention and trust in the academic achievement (Hoy & Miskel, 2013).

Academic optimism was desired as a blend of collective academic emphasis, efficacy, and faculty trust among colleagues, students and their dean. Therefore, academic optimism is a triadic collective construct (Woolfolk Hoy, 2019), that includes the affective, cognitive, and behavioral facets (Hoy, 2012). Although these factors are not the same in their essence, they affect the success of the students (Donohoo, 2018). These three components work in an integrated way to establish a positive and constructive school environment, called academic optimism (Gray & Mitchell, 2021). It appears that academic optimism is well flourished in terms of theoretical and empirical research. However, an instrument to study and evaluate this quality among university faculty members was not found. Such a tool can survey the perceptions and beliefs of faculty's attitude based on these factors and assist college deans as well as department chairpersons to better evaluate their faculty members and coach them towards more efficacy and help more efficient teaching and research functions. These considerations inspired the writers of the present article to study the subject and present the Faculty Members' Academic Optimism Inventory (FMAOI).

Methodology

In this survey research, data were collected using a researcher-made questionnaire of the academic optimism of faculty members. Factor structure and construct validity were examined by explanatory factor analysis and confirmatory factor analysis.

Participants

The participants were selected through stratified random sampling. They were selected to include faculty members from all public universities in Isfahan. One method for determining the appropriate sample size in quantitative research, especially factor analysis, is the sample size ratio to the number of statements. The proposed ratio is between 5 and 10 (Kyriazos, 2018). In the present study, the process of implementing the questionnaires proceeded in such a way that the researchers succeeded in completing the questionnaires on a sample of 211 university faculty members. According to the obtained ratio (211/23 = 9.17), the sample size was appropriate. In terms of demographic characteristics, 85 percent of them (181) were men and 15 percent (30) were women. They fall in the 32-58-year age group, and 143 of them were associate professors, 59 of them were assistant professors and 9 of them were full professors. The items were randomly presented in both pilot and main studies.

Procedure

In this study, a researcher-made questionnaire of the faculty members' academic optimism (FMAOI) was utilized. This questionnaire includes 23 items that measure the perception of the faculty members about their academic optimism in the university. Each item is rated on a 7-point. Likert scale: 1 (Not at all) - 7 (Very much so). The faculty members' academic optimism inventory (FMAOI) was prepared based on the research literature as well as the

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cooperation of education and psychology experts according to Hoy et al's (2006) teacher academic optimism scale. The initial version of the teacher academic optimism scale of Hoy et al. (2006) had 9 items that measured 3 factors. The first version was originally conducted with a sample of high school teachers in the United States. To develop the instrument utilized in this study, based on Hoy et al's (2006) teacher academic optimism scale, the items required to construct the faculty members' academic optimism (FMAOI) were collected. These items were about the capabilities, duties, relationships, activities and goals of faculty members. After applying the opinions of experts, the items were assigned to the main components of academic optimism resulting from Hoy et al (2006). Between 15 and 20 items were assigned to each component. Then, by carefully examining the face and content validity, the items were reduced and 11 to 15 items were assigned to each factor. By conducting a pilot study on 30 faculty members, statistical analyzes were performed and instruments were modified. Finally, a 29-item version with 3 components was presented. The table below presents these three factors and their definition.

Table 1
General characteristics of the questionnaire

Factors	Description and sample item	Items ARR	N Items
Collective efficacy	It refers to faculty members' common beliefs about their collective capabilities in achieving educational goals and preparing students for professional roles and responsibilities. (Q9: Faculty members in this department easily exposure their academic experiences to students).	1 - 14	14
Academic emphasis	It refers to the extent that faculty members focus on activities lead to academic achievement. (Q17: Faculty members in this department improve their performance using colleagues' academic experiences).	15 - 21	7
Faculty trust	It means the inclination to be vulnerable to others, with the assurance that they don't behave unfairly. (Q22: Faculty members in this department believes that their students have the ability to achieve high academic goals).	22 - 29	8

To finalize the questionnaire using the classical and new theories of measurement, the following steps were performed: reliability studies, convergent and divergent validity, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). To assess the validity of the present study, face validity and construct validity were considered. To obtain the face validity the opinions of relevant experts and researchers, as well as key and knowledgeable practitioners, were assessed. The construct validity, which is the most important part of the validity of this study, was investigated through exploratory factor analysis and confirmatory factor analysis. At the same time, the reliability coefficient of the questionnaire was estimated by calculating Cronbach's alpha coefficient.

For further analysis, the data obtained from the whole sample are randomly divided into two sub-samples approximately (A & B). The data of sample A were used for initial exploratory factor analysis (EFA) and sample B was used for confirmatory factor analysis (CFA). To control the differences between the subgroups that affect the factor structure in different samples, random selection is important for cross-validation.

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Results

Exploratory Factor Analysis

To exploit the components, the data were analyzed using a principle components analysis with a varimax rotation method by SPSS22. Exploratory factor analysis (EFA) is a data-based method in which there is no preconception about the number of factors (Kyriazos, 2018). However, researchers using EFA may already have presumptions about the latent structure that may appear. This presumption has also been the case in this study. Therefore, the subjectivity and uncertainty surrounding the various criteria used to extract the factors in the EFA often result in unreliable solutions. To cope with this limitation, several criteria including eigenvalue greater than 1, scree plot to determine the cut point of eigenvalues and the number of statements with high factor loadings (above 0.5) were used to decide on the extracted factors. It should be noted that at least three statements in each factor are needed to identify the stable common factors.

Initial results of the principal component analysis showed that the KMO indicator was 0.727, indicating a high degree of sampling adequacy. As well as, Bartlett's Significance Test, considering that the significance level is less than 0.001, indicates the confirmation of factor analysis in the sample group. The principal component analysis of the 29 questions indicated that four factors were extracted and could explain 76.389% of the variability of the variables. This prior factor analysis indicated four clusters of items: faculty perceptions about trust relations among coworkers, personal behaviors about their emphasis on scientific subjects, cognition feels about their professional task against students and other faculty members (especially younger individuals) and a single and separate component that its items were loaded on more than one factor. After performing multiple factor analysis and extracting multiple factors through various rotations and comparing the extracted factors with the theoretical structure of the scale and existing theoretical foundations and also considering factor analysis assumptions (factor value, percentage of variance and scree plot) questions 12, 13, 19, 26 and 29 were excluded from the analysis due to the low factor loading. Of the remaining 24 questions based on the theoretical foundations of the research and the varimax rotation method, three factors were extracted and these three factors explain 74.202% of the total variance. Scree Plot diagram of components, the simple structure of factors and formation for each subscale, the initial eigenvalues and the percentage of these three component variances are demonstrated in figure 1 and table 2.

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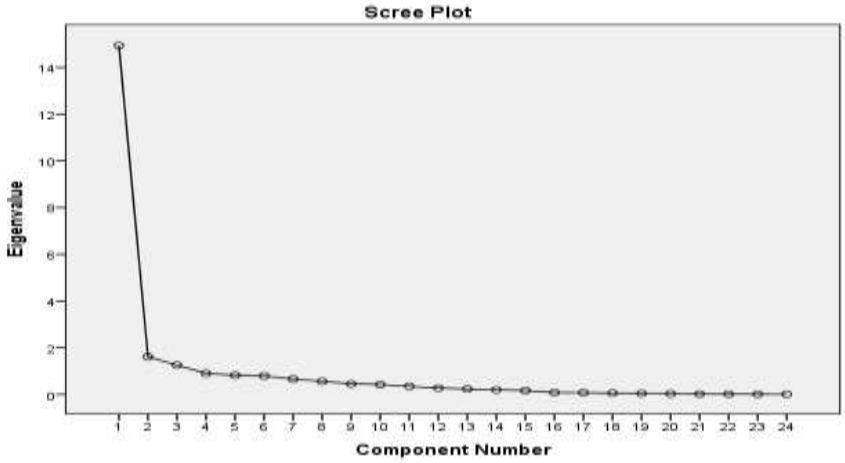

Figure 1. Scree Plot: Faculty Member Academic Optimism Scale

Table 2.
Rotated factors\Matrix, Initial Eigenvalue, Cumulative Percentage and Variance explained by the triple factors of academic optimism scale

Component	Items	Factor Loading	Initial Eigenvalues	% off Variance	Cumulative %
Professionalism	Q25	.88	14.94	28.72	28.72
	Q17	.82			
	Q14	.71			
	Q27	.68			
	Q4	.67			
	Q21	.66			
	Q10	.65			
	Q11	.65			
	Q22	.61			
	Q15	.61			
	Q1	.48			
Academic Emphasis	Q9	.83	1.62	23.96	52.68
	Q8	.81			
	Q7	.78			
	Q16	.64			
	Q2	.63			
	Q24	.61			
Collective Trust	Q20	.81	1.25	21.53	74.20
	Q28	.73			
	Q18	.72			
	Q23	.69			
	Q5	.68			
	Q6	.61			
	Q3	.51			

The estimation of scale reliability was also considered in deciding on the maintenance of the items. Although it is desirable to maximize the alpha coefficient, the excessive emphasis on this strategy in maintaining the items has led to the selection of cases that increase the homogeneity of the scale and thus reduce the size and dimensions of the

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structure measured by the scale. Therefore, experts were judged to identify items that increased heterogeneity and substantially the scale practical meaning. Increasing heterogeneity within an agent can help to scale validity in different cultures and reduce the measurement error (Crawford et al., 2010). However, both statistical and judgmental properties should be noted when deciding on scale clarification (Wieland et al, 2017). By the way, item 1 was eliminated due to expert judgment.

Eventually, 10 items on the first factor, 6 items on the second factor, and 7 items on the third factor had a high factor loading. The adaptation of indicators with predisposing factors for academic optimism shows that the first factor can be called the "professionalism", and so the second factor is called "academic emphasis" and the third factor is called the "collective trust".

Confirmatory Factor Analysis

The results of exploratory factor analysis on the academic optimism questionnaire have shown that all of the items are in three factors: professionalism, academic emphasis and collective trust. However, exploratory factor analysis does not indicate the goodness-of-fit of the hypothetical model to the data. A confirmatory factor analysis was used to achieve construct validity through SMART PLS software. Given that the data analysis in Smart PLS software is carried out in two evaluation stages including the model of measurement (validity and reliability) and the structural model, each section was examined separately.

Reliability and Validity of the Measurement Model

To examine this issue, reliability (Cronbach's alpha and combined reliability), convergent and divergent validity are used. According to Kyriazos (2018), the results of confirmatory factor analysis can provide convincing evidence of the convergent and discriminatory validity of theoretical structures. Cronbach's alpha is a classic criterion for measuring reliability and internal consistency. A high value of alpha (≥0.7), indicates the desired value of the explained variance between a structure and its related indexes that the values of table (3) indicate the acceptable reliability of the factors extracted. Composite reliability (CR) is a more modern criterion than alpha, in which the reliability of the structures is calculated concerning the correlation of the structures. If the composite reliability for each structure is greater than 0.7 (Henseler et al., 2009), it shows the inherent internal consistency of the measurement models. As seen, the CR in the hidden variables is above 0.9 which shows the high reliability of the extracted factors. Convergent validity shows the degree of correlation of a structure with its indices. Fornell and Larcker (1981) introduced the Average Variance Extracted (AVE) to review convergent validity. They stated that values above 0.5 represent an acceptable convergent validity. As shown in Table 3, AVE is above 0.5 for all variables and indicates the convergent validity of the structures.

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Table 3
Cronbach's alpha coefficient, Combined reliability and Convergent validity of each of the Factors

	AVE	Cronbach's alpha	Composite reliability
Total	0.87	0.97	0.95
Factor1	0.73	0.96	0.96
Factor2	0.74	0.93	0.94
Factor3	0.65	0.91	0.93

Fornell and Larcker Matrix is used to investigate the discriminant validity. In this method, the correlation between the indices of a structure and the degree of correlation between the indices of a structure with other structures is compared. Forrnell and Larcker (1981) stated that when the values on the main diameter (AVE square), are higher than their correlation for all variables, shows the proper divergent validity and good fit of the measurement model. This is established for all structures according to table 4.

Table 4
AVE Square Matrix and Structural Correlation Coefficients

	Factor1	Factor2	Factor3
Factor1	0.85		
Factor2	0.84	0.86	
Factor3	0.80	0.75	0.81

Evaluation of the Structural Model

After fitting the measurement model, in accordance with the algorithm of data analysis in the PLS, the structural model of the research was studied. To evaluate the structural model, several criteria including R- squares (R^2), Stone-Geisser Criterion (Q^2) and redundancy have been used.$R^2$is a measure that is presented for the effect of an exogenous variable with an endogenous variable, and because all variables of the model are higher than 0.8 (Bentler & Yuan, 1999), it indicates the strong fit of the structural part of the model. Q^2 measures the predictive power of the model. Therefore, it is above 0.35 for all variables of the model which indicates a strong fit of the structural model (Henseler et al., 2009).

Table 5
Total criteria of structural model

	R^2	Q^2	Commonality>0	Redundancy
Factor1	0.934	0.634	0.729	0.681
Factor2	0.844	0.576	0.733	0.622
Factor3	0.812	0.490	0.652	0.529

Figure 2 shows the path diagram of the confirmatory factor analysis of the parameters along with factor load and significant t-value. According to Fornell and Larcker (1981), factor loads above 0.5 are desirable and indicate a high correlation. Regarding the values of Fig. 2, all factor loads are higher than 0.74, which shows a high correlation. Given that the modulus of the t-value is greater than 1.96 (Sobel, 1982), it indicates the correctness of the relationship between the questions of each structure, and consequently the reliability of the

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measurement model. Therefore, it can be said that all the paths defined in the model are meaningful.

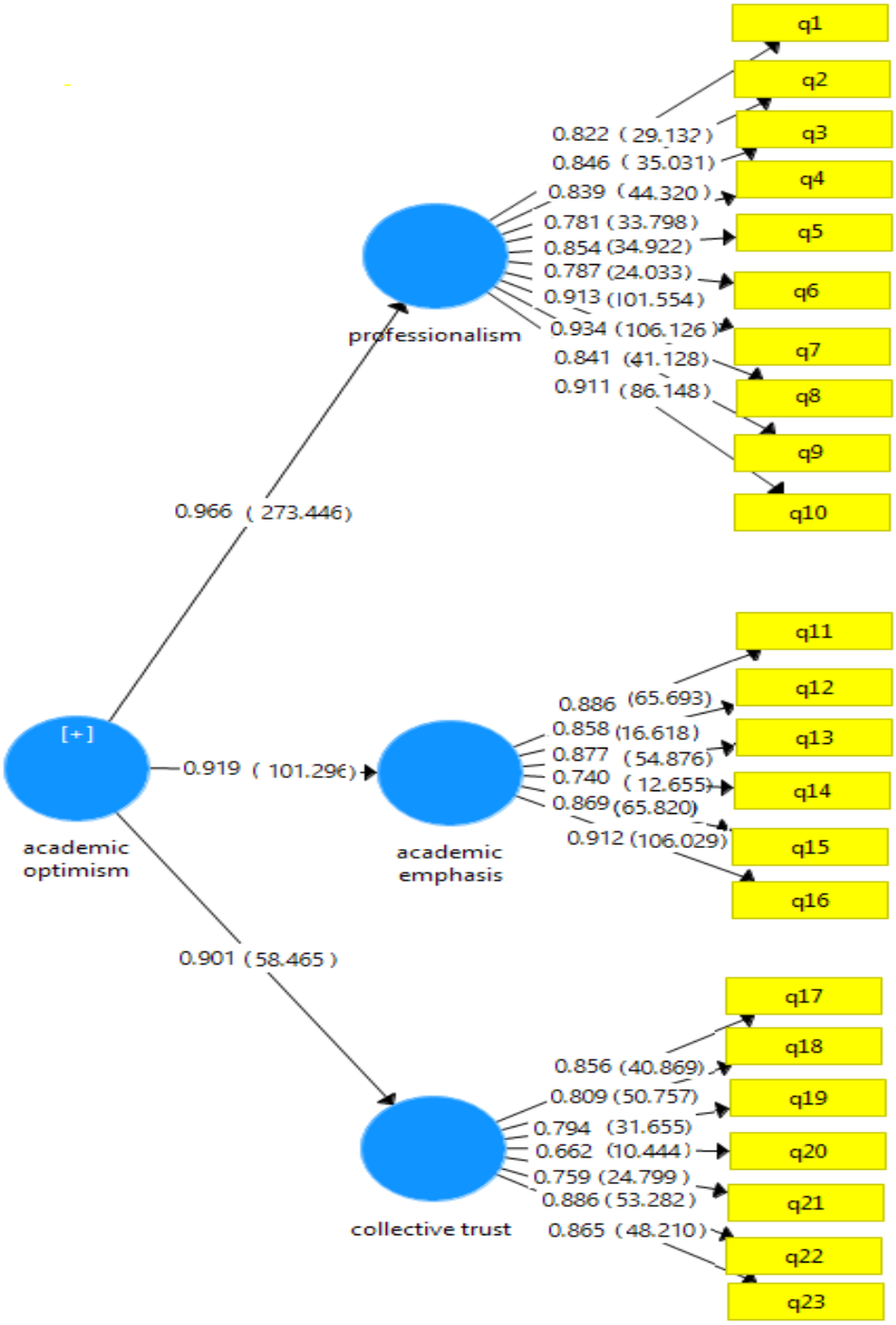

Figure 2. Measurement model for the FMAOI in the estimation of standard and meaningful state of the coefficients (factor load*)*

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Finally, the Goodness of Fit (GoF) index has been computed to measure the model fit. GoF was estimated as an indicator of overall adequacy in both the measurement and structure models (Henseler & Sarstedt, 2013). Gof of the model was 0.73 which indicates the large effect size and overall fitness of the model (Wetzels et al., 2009).

Discussion and Conclusion

This study aimed to develop and validate the Faculty Member Academic Optimism Inventory (FMAOI). Principal factor analysis of 23 items relating to FMAOI generated a meaningful 3-factor scale which predicted and specified %74 of the total variance. EFA and CFA after the panel of expert review, field and pilot study confirmed it. Therefore, a proper instrument was created to measure attitudes, feelings, perceptions and behaviors in the university context that could evaluate the motivation of individuals in the academic community toward academic achievement.

The first factor, professionalism, gauged those aspects of the faculty life that were specifically linked to them as faculty members of the university and distinguished them from other professions. Professionalism derives from the professional identity which provides a framework for how to behave and how to understand faculty members (Gilbert, 2021), which affects their insights on the role of mastery (Schwartz et al, 2018). Although efficacy statements loaded on a factor refers to collective efficacy, their implications are more closely aligned with the theoretical foundations of professionalism. Incidentally, this is better aligned with the strategies, goals, and responsibilities of universities and faculty members, and it can be turned into professionalism. Professionalism is a long-term process where self-efficacy can be a factor in its development. Professionalism is beyond self-efficacy and is a movement towards a professional identity (Lamote & Engels, 2010). Professionalism, in addition to believing in its own abilities and self-efficacy, contributes to the growth and development of its educational institution, and expands its academic entity through collaborative work in a learning community. Establishing a dialogue–driven community among faculty is essential (Gilbert, 2021) and learning communities have a valuable asset for faculty in higher education (Donohoo, 2018). Although self-efficacy is an effective aspect of teachers' academic optimism at schools, this construct should be institutionalized at universities and faculty members have to gain professionalism.

The second factor, academic emphasis, measured the extent which faculty members focus on activities that lead to academic achievement. As important as the professionalism of the faculty and trust, however, are the academic emphasis. Academic emphasis, like professionalism and trust, refers to Collaborative procedures, commitment to improving, teaching and learning and sets a high expectation and academic standards (Woolfolk Hoy, 2019). The academic emphasis is a behavior principle, and it shows the extent to which faculty members and institute dean emphasize the efforts and activities that lead to academic success in the university environment. It's the level that faculty members emphasize on satisfying the educational purposes of all learners (Tschannen-Moran & Gareis, 2019). In this climate, the faculty members have a high tolerance and deep commitment to core academic values, as well as strive to shape students' minds and respect for the successful ones. In addition, they define a "brand" of education in universities by attracting highly qualified students.

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And the last factor, collective trust, measured the level that faculty members trusted in their colleagues, deans and students. Due to the students' immaturity at school context, parents' cooperation is required. At university, however, we are dealing with mature clients that can decide by themselves according to Argyris' Immaturity- maturity theory. Therefore, instead of trusting parents, we need collective trust that promotes benevolence, reliability, competence, honesty and openness. Then, when the faculty member has trust in the environment, he or she can determine superior academic criteria confidently that is not weakened by the environment, the colleagues and the community, which increases the self-confidence. Faculty members have the duty of establishing effective learning communities (Thien et al., 2021), in which collective trust plays an important role. When faculty members, deans and students are connected and dependent on each other with trust or confidence within a learning community, they regard it as a team working together to reach collaborative purposes (Schwabsky et al., 2020). Therefore, when they try to enhance the academic community of their institutions, it will be effective to study trust carefully in higher education. Thus, the establishment and expression of high levels of faculty trust in colleagues, deans, and students depict critical factors in ensuring the effectiveness of universities (Yin & Zheng, 2018).

Eventually, while self- efficacy, trust and academic emphasis should be in the school environment to create academic optimism, they must be institutionalized in the university and embedded into the mission and goals of the university. Therefore, the FMAOI is the same tool that flourishes a new path of measuring a vast of properties including what are labeled perceptions and beliefs of faculty members at universities. This is the same as a paradigm shift to heutagogy (self-determined learning) in conflict with the persistence of pathology (Petersen, 2008). The understanding of what faculty members believe and their levels of academic optimism is important knowledge for the department chairpersons to prepare competent faculties to meet the ever-changing needs of students equitably. As the university adjusts to the changing environment in the 21st century and faculty members are the heart and soul of higher education (Yin & Zheng, 2018), it is essential to pay close attention to those beliefs that motivate the faculty and enable them to be successful across their activities.

The movement of universities to internationalization shows more attention to optimism and its dimensions. Especially, such universities should act interculturally. In general, an optimistic learning environment should persist in opportunities, facilities and trust (Gomide Jr et al., 2017), so that its faculty member insisted on the positive features of the behavior and quality of the university environment and society. Academic optimism in higher education is a "triadic concept" (Hoy et al., 2006) that is developed by the interactions between professionalism, faculty trust, and academic press. It can create a belief among faculty members that they have the capacity for academic improvement, and that students, colleges and the dean can be trusted to collaborate with them in this area. However, academic optimism is not optimal (Mitchell & Tarter, 2016). Rather, it is a combination of these factors so it does not dictate nor control educational outcomes. In brief, professionalism supports trust that creates and reinforces the academic optimism environment (Kirby & DiPaola, 2011).

Administrators and faculty members who are confronted with a new concept of academic optimism culture in higher education may need to evaluate this belief to better

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understand how they can improve their learning and working environment. The development of the FMAOI offers new opportunities for researchers engaged in higher education studies while building a new path for higher education institutions to assess their faculty members' academic optimism belief. This study is a pioneer research in measuring the faculty's academic optimism in higher education.

Finally, it should be noted that, although all aspects were planned to be considered in this instrument as much as possible, some of them were probably left out. It is expected, through the usage of this tool, the academic communities' feedback will lead to the possibility of further improvement in future revisions.

Declaration of Conflicting Interests

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Human Participants

The present research is a report from dissertation. All ethical guidelines are considered based on the university rules and regulations. All necessary ethical considerations related to human participants were considered.

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Appendix

Faculty Members Academic Optimism Inventory (FMAOI)

Factors	No	Faculty members in this department:
professionalism	1	recognize and acknowledge students' academic achievement.
	2	easily expose their academic experiences to students.
	3	easily exchange information.
	4	encourage students when they get academic achievements.
	5	insist on doing scientific work.
	6	believe that they have professional responsibility.
	7	have the skills in using up-to-date academic resources.
	8	motivate their students to do academic works.
	9	learn from their own and colleagues' mistakes.
	10	are faithful to the dean and believe he does a good job.
Academic Emphasis	11	improve their performance using colleagues' academic experiences.
	12	Possess the skills in evaluating students' performance.
	13	Set up conditions in which students engage in classroom discussions.
	14	believe that the dean shares available information clearly.
	15	are able to deal with the most difficult students' academic problems.
	16	believe the dean sets high academic standards for performance.
Collective Trust	17	believe that if students find a chance, they will cheat.*
	18	believe that their students have the ability to achieve high academic goals.
	19	believe that students are competent learners.
	20	have a positive attitude toward social life at university.
	21	possess the skills in utilizing different teaching strategies.
	22	promote department's rank of scholarship.
	23	have formed an academic community.

*reversed item

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