

Hierarchy of Competencies for Modern Dancers' Performance based on AHP: For the Performance on Stage

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I. Introduction

The concept of competency-based learning, instead of knowledge or skill acquisition, is placed at the center of achievement or performance settings nowadays, as competency comprehends not only tangible enhancement, such as knowledge and/or skill learning, but also intangible attainment, such as changes of attitude and/or self-confidence. Thus, competency is considered a precursor to determine one's behavioral directions or performance capacity, as one's action is less likely to occur with either cognitive or affective changes, but certainly more likely to be carried out with the related competencies that embrace cognitive, affective, and attitudinal accomplishments.

Dance is conducted also in performance settings. Dancers' performance is definitely influenced by the type and level of competencies that they have that accordingly underlie their successful performance. Therefore, this study is designed to investigate the weight of each hierarchy of competencies that dancers must develop to improve their performance.

Diverse competencies affect modern dancers' performance. Dancers' competencies may include physical abilities, such as techniques, physique, or physical fitness, and psychological ones, such as sense of persistence, creativity, passion, or artistic receptivity. Training and experience, in addition to innate talents, are generally assumed to affect individual achievement that could be replaced by the

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word ‘performance’ (Ericsson, A. & Lehman, 1996, pp.278-279). In general, knowledge is at the core of expertise or competency acquisition. In relation to human movement settings, memory capacity or mental representation is the key to performance (Bläsing, Tenenbaum & Schack, 2009, p.351). Murray (2015) singled out ‘creativity’, ‘unruliness (autonomy)’, ‘energy (passion)’, ‘intuition’, and ‘industry’ as first, third, fifth, sixth, and tenth, respectively, of the top twelve keywords used in contemporary performance training, in addition to other keywords associated with physical or intellectual domains. These keywords supposedly contain affective sub-components, such as inspiration, desire, unconsciousness, and effort in themselves.

In sum, previous studies point out that dancers’ successful performance comprises not only their physical skills and fitness but also psychological capacities, such as creativity, energy, unruliness and industry, in addition to their cognitive abilities to record, reorganize and retrieve movement patterns in dance performance settings. Therefore, this study looks into the cognitive theories on ‘passion’ to explain how desirable form of passion maintain one’s effort and persistence (Padham & Aujla, 2014, pp.37-44), ‘self-determination’ to demonstrate how autonomy affects one’s behavior (Deci & Ryan, 1994, pp.4-5; Ryan & Deci, 2000, pp.68-78) and ‘self-efficacy’ to suggest how self-perception of one’s skill level changes his/her action (Bandura, 1995, pp.1-45).

The results of this study are expected to deliver multifaceted implications. Determining the hierarchy of competencies for modern dancers’ successful performance provides not only the order of competencies but also opportunities to consider how and what to encourage, envision, enable, and empower modern dancers.

II. Related Research:

Passion, Self-determination, Self-efficacy, Competency

Performing one’s best and enjoying a task are prerequisites for a successful achievement of a goal or a performance. Alternatively, at least one of the two must be underlain by one’s success. Thus, human spontaneity is deemed important as doing one’s best is anchored on one’s enthusiastic intention, and enjoyment definitely underlies one’s senses of willingness and motivation (Deci & Ryan, 1994, pp.3-14; Ryan & Deci, 2000, pp.68-78). Dance performance is an integrated product that consists of dancers’ endured passion, tireless motivation, robust self-confidence, earnest efforts, and brilliant creativity, amongst other aspects. Notably, all these virtues rely on dancers’ spontaneity.

Spontaneity is a core concept in contemporary cognitive science. Most contemporary cognitive theories that are interested in human behavior, such as goal orientation, motivation, passion, self-determination, and self-efficacy, focus on internal power, that is, spontaneity that emerges from

one's self rather than is influenced by external factors. One's internal changes are also considered essential foundations to understand and expect his/her behavior especially in achievement settings. Thus, the three cognitive theories, namely, the Dualistic Model of Passion (DMP), Self-determination Theory (SDT), and Self-efficacy Theory (SET), which are concerned with one's internal power, are reviewed in this study to determine what other components influence one's performance.

Passion in DMP is perceived as an essential power for someone to endeavor, challenge, or persist in achievement settings, and identified to have two different kinds, namely, harmonious and obsessive (Padham & Aujla, 2014, pp.37-44; Valleraud, Mageau, Elliot, Dumais, Demers. & Rousseau, 2008, pp.373-392). A person who acts with harmonious passion demonstrates an autonomous attitude and behavior because he/she chooses and engages in an activity with his/her own interest but with a contingent reward. In contrast, one who acts with obsessive passion more likely does an activity for external reasons, such as compulsion for success, societal reputation, or/and monetary rewards.

SDT describes that intrinsic motivation is the desirable form of motivation worth pursuing. The cognitive and the affective components of intrinsic motivation termed as 'recognized importance' and 'enjoyment' in SDT play a key role in one's successful achievement or performance (Deci & Ryan, 1994, pp.3-14; Ryan & Deci, 2000, pp.68-78). In addition, SDT indicates that the success in these contexts does not imply only achieving, winning, or overcoming but also one's spontaneous, active, and consistent involvement, challenge, or participation in an activity or a task. That is, one's internal powers, such as harmonious passion, desirable form of motivation, and/or high level of self-efficacy are closely interrelated to fostering necessary competencies in dance performance.

Self-efficacy theory is also important in hierarchical competencies in dance performance. Perceived self-efficacy is defined as 'beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1995, pp.1-45). One at the high level of self-efficacy does not give up but always persists. Highly self-efficacious people are more likely to succeed in an activity or a given task (Bandura, 1995, pp.1-45).

Competency, as described in the introduction, indicates human cognition, affect, and experience-integrated ability to deal with complex problems that people face in contemporary society (Horton, 2000, pp.306-318). Thus, competency, as defined by the Organization for Economic Cooperation and Development (henceforth, OECD) (Rychen & Salganik, 2003), is a comprehensive concept including not only cognitive capabilities, such as memorizing, retrieving, reasoning, and evaluating, but also psychosocial dimensions, covering senses of spontaneity, teamwork, challenge, and so on, as well as integrated abilities, such as creativity, communication, and citizenship. A competency, in accordance with its comprehensiveness, consists of multiple sub-factors supporting its characteristics. The sub-factors are called as "sub-components" in this study.

III. Methodology

1. Participants

Two groups of participants joined this study. Table 1 presents the demographic information of the first group, comprising three experts who reviewed the competencies and sub-components for each competency, all of which were selected from previous studies. All three experts had been either first or corresponding author in dance-related research at least five times.

<Table 1> Demographic information of participants in the expert review

Expert	Gender	Age group	Occupation	Career	Academic career
E-1	M	40s	Professor (Sport pedagogy)	13 years	Doctoral
E-2	F	50s	Dance performer and instructor	20 years	Doctoral
E-3	F	40s	Instructor (Dance education)	12 years	Doctoral

Table 2 presents the demographic information of the second group, comprising 16 experts who had a 10-year modern dance experience who participated in the analytical hierarchical process (AHP). Ten-year experience includes all years that they have performed modern dance on stage except high school years. Snowball sampling was adopted to gather the participants for the AHP. Other participants were recruited through the recommendation of Expert ‘E-2’ in the expert review and Participants ‘D’ and ‘G’ in the AHP. All three are doctorate graduates and have the longest years of dance performance experience among the participants in groups.

<Table 2> Demographic information of participants in AHP

Participant	Gender	Age group	Employer	Career	Academic career
A	F	30s	Municipal	15 years	Master’s
B	F	40s	Municipal	13 years	Master’s
C	F	30s	Municipal	16 years	Bachelor’s
D	M	40s	Municipal	28 years	Doctoral
E	F	30s	Private	16 years	Master’s
F	F	30s	Private	13 years	Master’s
G	F	40s	Private	28 years	Doctoral
H	F	30s	Private	13 years	Master’s
I	F	30s	Municipal	15 years	Bachelor’s
J	F	30s	Municipal	19 years	Bachelor’s
K	F	30s	National	20 years	Master’s
L	F	30s	National	25 years	Master’s
M	F	40s	Municipal	28 years	Master’s
N	M	30s	Municipal	14 years	Bachelor’s
O	F	30s	Municipal	15 years	Bachelor’s
P	F	30s	Municipal	20 years	Master’s

2. Informed Consent

Each participant in the expert review and AHP was provided with an informed consent form after they had received a verbal explanation of the study's purpose, procedure, and duration of the survey as well as a verbal guarantee of confidentiality of personal information and notification of the results of the study. Each participant signed the form.

3. Data Collection

The purpose of this study is to explore the hierarchy of competencies and sub-components for modern dancers' performance. A literature review was initially performed to figure out what competencies were included in previous studies. Secondly, an expert review was done to examine their appropriateness. Finally, AHP was carried out to have refined competencies and sub-components. Table 3 presents the competencies and sub-components in improving dancers' performance determined through the literature review (Bläsing, Tenenbaum, & Schack, 2009, pp.350-360; Eddy, 2002, pp.46-62; Hamilton & Robson, 2006, p.1; Murray, 2015, pp.46-58; Padham & Aujla, 2014, pp.37-44; Ryan & Deci, 2000, pp.68-78; Son, 2010, pp.19-27; Yoon, 2015, pp.1-16). The three experts examined together the appropriateness of these competencies and the relatedness of each sub-component to its competency, and removed any competency or sub-component that could be redundant or unrelated. They reclassified, re-organized, and or renamed them if there were any competencies or sub-components that would not earn their unanimous agreement for appropriateness for each competency and sub-component or for relatedness of each sub-component to the belonged competency.

<Table 3> Initial competencies and sub-components based on literature review

Name of competency	Sub-components
Technique	Delicacy, sense of challenge, depth, flexibility, power
Physique	Appearance, height, BMI
Fitness	Flexibility, upper body strength, lower body strength, muscular endurance
Memory	Memorized pattern and spatial sense
Artistic receptivity	Sensibility, sympathy, music interpretation, sense of coordination, expression
Intention	Passion, spontaneity, industry, persistence
Creativity	Imagination, intuition, deliberation

As a result, the sub-components 'Flexibility' and 'Power' for the competency of 'Technique' were found conceptually similar to those for the competency of 'Fitness' and thus reallocated to the latter, then 'Power' was renamed 'Strength'. The sub-component 'Depth' also for the competency of 'Technique' was removed, as it is vague and too comprehensive. The sub-components 'Height' and

‘Body Mass Index (BMI)’ for ‘Physique’ were combined and renamed ‘Appearance’, as the latter is already inclusive of both sub-components. The competencies of ‘Physique’ and ‘Fitness’ were combined as ‘Physique’. The competency of ‘Memory’ and its sub-components, excluding ‘Spatial Sense’ that was removed for its comprehensiveness, were merged with that of ‘Technique’. The sub-component ‘Expression’ for the competency of ‘Artistic receptivity’ became ‘Artistic receptivity/expression’ because the process of appreciating and receiving is different from that of producing what are reproduced in the mind. The sub-component ‘Sense of Coordination’ was removed as it was deemed redundant with ‘Sensibility’, which embraces the ability of music-dance coordination. The sub-component ‘Persistence’ was merged with the competency of ‘Intention’ and renamed as ‘Intention/persistence’, as the concept of ‘Intention’ is closer to that of commitment and ‘Persistence’ is to consistency. The sub-components for the competency of ‘Creativity’ were appropriate. All the competencies and the sub-components initially examined by experts are presented in Table 4.

<Table 4> Competencies and sub-components based on the expert review

Name of competency	Description	Sub-components
Technique	Bodily movement with particular dance patterns	Pattern, delicacy, sense of challenge
Physique	Physical fitness	Flexibility, strength, appearance
Artistic receptivity/ expression	Sensibility to experiences and the ability to reorganize and demonstrate	Sensibility, sympathy, musical interpretation
Intention/persistence	Commitment and consistent devotion to dance	Passion, spontaneity, industry
Creativity	New idea based on understanding, application, analysis, integration, evaluation	Imagination, intuition, deliberation

AHP was performed following the expert review to determine the hierarchy of the competencies and sub-components for modern dancers’ performance. The comparative table (see Table 5) for determining the relative hierarchy between competencies or sub-components was distributed and then analyzed. For instance, assume that there are two competencies (or two sub-components under the same competency) in the comparative table: Competency A is on the left wing whereas competency B is on the right. Each wing has numbers from one to nine. Firstly, each participant is instructed to select only one number, in either the left or right wing of the table. Secondly, each participant is asked to select any number in the left wing of the table that corresponds to competency A (or sub-component A) if he/she thinks that competency A in the left wing of the table is more significant for dancers’ performance than competency B (or subcomponent B) is. The selected number in the wing demonstrates the degree of significance allocated by the participant for such sub-component. If a

participant selects the number “8” in the left wing of the table for competency A (or sub-component A), then this means that the participant considers competency A (or sub-component A) as eight times more significant than competency B (or sub-component B). Comparisons were conducted only between two different competencies or between two sub-components in the same competency.

<Table 5> Comparative table for relative degree of significance

Significance of competency (or Sub-component) for modern dancers' performance																		
Competency (or sub-component) A	A is more significant							Sa-me	B is more significant							Competency (or sub-component) B		
	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7		8	9

4. Data Analysis

The competencies and sub-components were reviewed by the experts, and then examined through the AHP. AHP is a statistical instrument used to determine the hierarchical order of the factors by calculating their weight. It is employed to establish a matrix representing the relative values of the related attributes. The consistency index (CI) and consistency ratio (CR) were included for the purpose of consistency of panels' marks (Wind & Saaty, 1980, p.646).

Thus, the CI and CR values for each competency and sub-component in this study were checked to see the consistency of each participant's answers. In the formula to calculate the value of CI, 'λ' indicates an eigenvalue and 'n' implies the matrix size. The difference between 'λmax' and 'n' shows the inconsistency of the participants' answers. Thus, the value of 'λmax' and that of 'n' become equal if participants' answers are totally consistent. RI in the formula for CR indicates the average value of CI for random matrices (Alonso & Lamata, 2006, p.560). Participants' answers are considered consistent and trustworthy if the minimum value of both CI and CR is < 0.1 (Noble & Sanchez, 1993, p.103; Wind & Saaty, 1980, p.646). Expert Choice ver. 11.5 was utilized to produce the CI and CR values.

IV. Results

1. Competencies in AHP

The competency of 'Technique' was placed at the top of the hierarchy list as it has been regarded as the most important component in previous studies. The weight score for 'Technique' was calculated as .351. The participants in this study selected the competency of 'Artistic receptivity/expression (.210)' as the second important one in the hierarchy, since they may understand that dancers' performance techniques could be viewed as just physical skills without artistic receptivity and

expression.

The competencies of ‘Physique (.165),’ and ‘Creativity (.152)’ are placed at third and fourth position respectively, and ‘Intention/persistence’ was placed at the bottom of the list with the weight score of .123. What is noteworthy is that invisible competencies of ‘Creativity’ and ‘Intention/persistence’ were placed relatively lower than visible ones like ‘Technique’ and ‘Physique’ except the competency of ‘Artistic receptivity/expression.’ The CI and CR values were less than 0.1, which implies that the participants’ answers were consistent and that each weight score was reliable (Table 6).

<Table 6> Weight and hierarchical order of competency

Competency	Weight	Hierarchical order	CI/CR
Technique	.351	1	CI and CR < 0.1
Artistic receptivity/expression	.210	2	
Physique	.165	3	
Creativity	.152	4	
Intention/persistence	.123	5	

2. Sub-components in AHP

The sub-component of ‘Pattern’ in the competency of ‘Technique’ was placed at the top with the weight score of .508. ‘Sensibility (.568)’ in the competency of ‘Artistic receptivity/expression,’ ‘Flexibility (.448)’ in the ‘Physique’ competency, ‘Intuition (.390)’ in the competency of ‘Creativity’ and ‘Passion (.490)’ in the ‘Intention/persistence’ competency were respectively considered the most important sub-component in each competency. The sub-components of ‘Delicacy (.267)’ and ‘Sense of challenge (.225)’ took the second and the third position respectively in the ‘Technique’ competency. Likewise, ‘Sympathy (.279)’ and ‘Musical interpretation (.153)’ in the Artistic receptivity/expression’ competency, ‘Muscular strength (.380)’ and ‘Appearance (.171)’ in the Physique’ competency, ‘Deliberation (.328)’ and ‘Communication (.282)’ in the ‘Creativity’ competency, and ‘Spontaneity (.282)’ and ‘Industry (.229)’ in the ‘Intention/persistence’ competency were placed at second and third position respectively (Table 7).

<Table 7> Weight and hierarchical order of sub-components

Competency	Sub-components	Weight	Hierarchical Order	CI/CR
Technique	Pattern	.508	1	CI and CR < 0.1
	Delicacy	.267	2	
	Sense of challenge	.225	3	

<Table 7> Continued

Competency	Sub-components	Weight	Hierarchical Order	CI/CR
Artistic receptivity/ expression	Sensibility	.568	1	CI and CR < 0.1
	Sympathy	.279	2	
	Musical interpretation	.153	3	
Physique	Flexibility	.448	1	
	Muscular strength	.380	2	
	Appearance	.171	3	
Creativity	Intuition	.390	1	
	Deliberation	.328	2	
	Communication	.282	3	
Intention/ persistence	Passion	.490	1	
	Spontaneity	.282	2	
	Industry	.229	3	

V. Discussion and Conclusions

1. Competency

The participants considered that as long as one's dance is performed on stage in front of an audience, techniques must be acquired. Thus, its placement at the top of the list is understandable, as the definition of technique as incorporating knowledge of bodily movement and physical skills corresponds to the traditional concept of competency as retention of knowledge and skills. Such concept still holds among contemporary dance experts (Horton, 2000, pp.306-318).

'Physique' was separated from 'Technique' and ranked third on the list. 'Artistic receptivity/ expression' was regarded more important than 'Physique' and came in second. Physical fitness and appearance must be among the essentials to acquire dance techniques. Techniques cannot be manifested without physical fitness. Dancers' psychological and physical stress to have 'a good body' is enormous in everyday life and that their stress to be fit is interrelated directly with technical skill development for their performance on stage (Hamilton & Robson, 2006, p.1). The feasible reason that the participants separated 'Physique' from 'Technique' could be because they were already physically fit as professional dancers with more than 10 years of experience, or they might have regarded the former as a prerequisite that does not need to be mentioned but included in the list. 'Physique' would have been placed at the second or even at the first if the survey were administered to novice or intermediate dancers, such as those focusing on jump training that requires bodily fitness and physique (Poggini, Losasso, Cerreto & Cesari, 1997, p.46-50). Expert dancers utilize music as mental landmarks, demonstrating the participants' higher inclination toward 'Artistic receptivity/

expression’, which was considered as a career-taking or career-originated competency, than ‘Physique’ (Stevens, Ginsborg & Lester, 2010, pp.234-250).

Next, ‘Creativity’ was ranked fourth, followed by ‘Intention/persistence’. This ranking is consistent with previous studies that found one’s creativity and ability to appraise and express aesthetic affordances in dance performance is deemed important (Bläsing, Tenenbaum & Schack, 2009, pp.234-250; Hamilton & Robson, 2006, p.1; Murray, 2015, pp.46-58). Such ranking could also be attributed to their extensive professional experiences, signifying that they already present intention and persistence as a dance performer, and thus they would rather focus on how to perform better. ‘Intention/persistence’ could have ranked higher on the list among novice or intermediate dancers. Intangible competencies such as ‘Artistic receptivity/expression’ and ‘Creativity’ were seemingly recognized as essential in a quality dance performance. Such ranking also demonstrates the participants’ recognition of the need to foster harmonious rather than obsessive passion and create a spontaneous and a self-regulated rather than a rigid atmosphere, as both ‘Artistic receptivity/expression’ and ‘Creativity’ cannot be achieved without interest and spontaneity in self-regulated circumstances (Padham & Aujla, 2014, pp.37-44; Ryan & Deci, 2000, pp.68-78). The participants’ recognition of the importance for a spontaneous behavior and atmosphere is also revealed in the sub-components of ‘Intention/persistence’.

The participants ranking of ‘Artistic receptivity/expression’ as higher than ‘Creativity’ contradicts previous studies pointing out the close relationship between dance or dance education and creativity (Schwartz, 1993, p.8), as well as the need for creativity to be fostered especially in a dance performance (Alter, 1984, pp.153-158; Watson, Nordin-Bates & Chappell, 2012, pp.153-173). Nevertheless, two reasons explain the participants’ decision to rank ‘Artistic receptivity/expression’ higher than ‘Creativity. First, it could be attributed to their exposure to dance-specific cultural contexts in Korea that differentiate rigidly the role of choreographers to produce and manage the overall dance performance from that of dancers to demonstrate what has been choreographed. In Korea, the dance teachers role is to organize specific dance movements and overall settings (Kim, 2011, pp.29-50; Jung & Baek, 2016, pp.151-174), and dance performance-related admission tests in colleges are composed of ‘a creative dance performance’ and ‘a video-clipped performance imitation’ in which students only imitate a dance performance. They are not required to be creative to select music and organize or coordinate music with a dance movement. This approach discourages dance-learning students’ spontaneity and creativity. Second, ‘Artistic receptivity/expression’ is considered a vital competency for dancers and a perfunctory in a dance performance to approach not only the audiences’ cognition but also their emotion.

The participants in this study placed more importance on the visible competencies, such as techniques, facial and body expressions, or physique, than the invisible and inherent ones, which are

difficult to detect in a performance, such as creativity and persistent practice. This could imply that their self-efficacy is based on their summative evaluation of how good they could perform on stage than a formative evaluation of how persistent they have been in practice. Another feasible inference for higher placement of visible competencies is that the participants may regard dance performance as a visible on-stage product, with its quality determined by the audience based on demonstrated techniques, facial and body expressions, and physique, compared with the case of invisible competencies. Another possible reason for their priority on visible competencies is that invisible competencies, such as their accumulated effort in practice and creativity in performance, are not demonstrated by themselves but immersed in the visible competencies and delivered to the audience.

Following the logic that the participants regarded the visible competencies higher than the invisible ones, the combination of the first three competencies of ‘Technique’ (first), ‘Artistic receptivity/ expression’ (second), and ‘Physique’ (third), which are visible, could be adequate to achieve self-efficacy, compared with the combination of ‘Creativity’ (fourth) and ‘Intention/persistence’ (fifth), which are invisible. This is consistent with the role of dance performers to demonstrate to the audience what has been choreographed. With such role, their level of self-efficacy may improve by developing their techniques, expression, and physique, which are described important in previous studies (Bandura, 1990, pp.128-163; Hamilton & Robson, 2006, p.1). Consequently, their level of self-efficacy is likely unaffected with an improvement in invisible competencies, such as ‘Creativity’ and ‘Intention/persistence’.

2. Sub-components

The selection and the order of the sub-components for each competency are quite consenting and understandable. The sub-component of ‘Pattern’ in ‘Technique’ could suggest that participants in this study regarded a technique not as a fragmented motion but as a chained movement. How well and long dancers can perform rely on how well dancers have memorized and retrieved sets of dance movement, as delineated in earlier studies (Anderson, 1993, pp.35-44; Ericsson & Lehman, 1996, pp.273-305). Human beings can manage only five to nine activated frames of knowledge at a time (Miller, 1958, pp.485-491), and the memorized movements begin to fade within 20 seconds (Brown, 1958, pp.12-21). The difference between experts and novices is whether they can establish associative bundles or patterns of knowledge or skills in their mind. It suggests that how many patterns one can perform as well as how well, without conscious effort, one can do them are closely interrelated with the competency of ‘Technique’, which is apparently similar to the concept of self-efficacy. It seems reasonable that, in this study, the storage and retrieval of chained techniques, called ‘Pattern’, and the delicate understanding and demonstration of techniques, called ‘Delicacy’, were placed first and second, respectively, in the hierarchy of sub-components for the competency of ‘Technique’.

Participants in this study unanimously selected and arranged the sub-components of ‘Sensibility’, ‘Sympathy’ and ‘Musical interpretation’ in that order for the competency of ‘Artistic Receptivity/expression’. Emotional voice, instilled in facial and body expression through years of practice and experience, plays an important role in dance performance settings to touch audiences (Eddy, 2002, pp.46-62). The participants in this study seemingly considered that dancers’ interaction with choreographers, music, or a role taken should be carried out with not only cognitive understanding but also shared emotions.

The sub-components of ‘Flexibility’, ‘Muscular strength’, and ‘Appearance’ were selected for ‘Physique’. It seems that a harmonious and balanced development of ‘Flexibility’ and ‘Muscular strength’ must be a premise. The importance of flexibility and muscular strength in dance performance has been highlighted in previous works (Koutedakis, Bouziotas & Karatzaferi, 2007, p.33).

The inclusion of ‘Intuition’, ‘Deliberation’, and ‘Imagination’ as the sub-components for ‘Creativity’ indicates that creativity needs both instinctive understanding, which is more related to feeling and cognitive comprehension, which is more likely to be combined with reasoning. Creativity has been described as ‘a form of tacit knowledge prior to logical reasoning’ (Murray, 2015, pp.46-58), which helps infer that intuition is the result of accrued experience and career. The position of ‘Intuition’ at the top sub-components for ‘Creativity’ seems understandable given that all the participants had at least 13 years of professional experience. The supportive relationship between the sub-component of ‘Deliberation’ and the competency of ‘Creativity’ (Houtz & Frankel, 1992, pp.183-189) is described as incubation, indicating a break that one steps back from the confronting task and looks back at what he/she has done for it. ‘Imagination’ indicates not only a dialogue with other people but also an interaction with an experience.

The participants considered that their dance performance is founded on interest-based willingness based on their selection of ‘Passion’ and ‘Spontaneity’ as more important than ‘Industry’ for the competency of ‘Intention/persistence’. This implies a harmonious rather than an obsessive passion (Vallerand et al., 2008, pp.373-392), because the former relies on performers’ interest and enjoyment, which are found in spontaneity (Sheldon, 2002, p.66).

3. Suggestions and Limitations

The competencies and the sub-components demonstrated in this study are slightly different from those suggested in other studies (Association of American Colleges & Universities, 2007; European Commission, 2000; Rychen, & Salganik, 2003). The former focused on modern dancers and their performance, whereas the latter was aimed for general students in high school or college. As regards hierarchical order, the participants’ more than 10 years of professional experiences were reflected on

their selection of the order of the competencies and the sub-components. They seemed to highlight the overall visible competencies and the related sub-components probably as they took into account the purpose of this study not only for dancers but also for the performances.

The invisible competencies, especially ‘Creativity’, need to be reconsidered for the purpose of creative movement and performance. The dichotomization of the role of choreographers and dancers hinders the growth of creativity in dance performance and dancers’ movement on stage. Active communication between choreographers and dancers help improve creativity in dancers’ movement and performance (Boies, Fiset & Gill, 2015, pp.1080-1094; Zhang & Kitalong, 2015, pp.199-216). Therefore, this study suggests that circumstances to boost active communication among dancers, choreographers, producers, and performance-related personnel be established to improve their creativity.

The participants in this study were three experts, who reviewed the initially selected competencies and sub-components from previous studies, and 16 experienced dancers with more than 13 years of professional experience. Dancers with less than 10 years or more than 30 years of experience could have arranged the competencies and sub-components differently. Interviews could have been conducted to delve deeper into the understanding AHP participants’ decisions. However, the process of conducting AHP to understand the competencies and sub-components is totally different from figuring out the contexts of AHP participants’ decisions, as the settings and research design are completely different. Thus, qualitative study that can shed light on the specific and in-depth contexts of the results of this study needs be designed in the future. Subsequent works need to be designed with diverse qualitative approaches, such as in-depth interviews with thorough questions as well as participant or non-participant observations with carefully established guidelines.

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계층분석(AHP)을 통한 현대무용수 역량의 우선순위 탐색: 무용공연 수행을 중심으로

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본 연구는 현대무용수의 공연수행에 필요한 역량에 대해 알아보고 각 역량의 정량적인 우선순위를 탐색하고자 계층분석(AHP)을 실시하였다. 선행연구에 따르면, ‘전문가적’ 무용수의 움직임과 테크닉이라는 요소가 다른 요소들보다 더욱 주목을 받았다. 하지만 본 연구는 무용수의 테크닉에 더해 어떠한 다른 역량이 공연수행에 필요한가를 우선순위를 통해 살펴보았다. 이를 위해 문헌연구와 전문가 협의를 거쳐 무용공연 수행에서의 중요한 역량과 역량의 하위요소를 조사한 후, 계층분석을 통해 해당 역량과 하위요소에 대한 우선순위를 살펴보았다. 계층분석은 쌍대 비교를 통해 이루어졌으며 분석을 통해 나타난 역량과 하위요소는 일관성지수(CI<.1)와 일관성비율(CR<.1)의 기준을 적용하여 검증되었다. 연구의 결과, 연구참여자들은 ‘무용테크닉(.351)’, ‘예술적 민감성과 표현(.210)’, ‘체형 및 체력(.165)’, ‘창의성(.152)’, ‘인내(.123)’의 순으로 무용공연수행에서의 역량이 중요하다고 판단하였다. 끝으로 무용 창작 과정에서의 안무가와 무용수의 적극적인 소통을 통한 창의성 향상이 함께 이루어졌을 때 성공적인 무용공연 수행을 기대할 수 있음을 시사한다.

키워드: 현대무용(Modern dance), 역량(Competencies), 공연(Performance), 계층분석(AHP), 무용테크닉(Dance technic)