The effects of training gaps on the motivation of TESDA baking scholars during the pandemic

Genia E. Balaguer (University of the Philippines, Philippines)
Shirley V. Guevarra (University of the Philippines, Philippines)

INTRODUCTION

Motivation is considered one of the most important factors to support the learning process since it enhances personal growth and lifelong learning (Genc & Kaya, 2010). A great deal of research has been performed on motivation in academic settings, but not much investigation has been done yet in the domain of the Technical Vocational Education Training (TVET) sector during the COVID-19 pandemic. In the Philippines, the Technical Education and Skills Development Authority (TESDA) continued providing skills training programs through blended learning during the pandemic despite the varying community quarantine measures imposed by the government. Bread and Pastry Production National Certification Level II (BPP NC II) is one of the qualifications TESDA offers in the tourism sector to fill the gap in the hospitality industry. Technical-vocational institutions (TVIs) offering culinary courses experienced significant challenges in providing hands-on practical training (Ryotaro, et al., 2021) in the kitchen due to class suspensions. In particular, the TESDA baking scholars experienced different durations of training gaps of up to six months from online training to face-to-face training. Similarly, there is also a gap in the assessment, which is the basis for certification.

The present study aims to determine if the training gaps affected the motivation of the students to finish the course program using Self-Determination Theory (SDT). The primary research questions were as follows: RQ1: What are the motivational orientations of TESDA scholars toward learning a baking skill? RQ2: Is there a change in the motivation of TESDA scholars from training to assessment due to the effect of the Philippine quarantine measures? RQ3: Are TESDA graduates motivated to undergo competency assessment after the training?

SDT posits that autonomous motivation reflects the highest quality of regulation, whereas controlled motivation and amotivation reflect the intermediate and lower ends of the quality continuum (Deci & Ryan, 1985). The conceptual framework depicting the relationship of learning and assessment motivation to training and assessment outcome is shown in Appendix A. Based on this, we propose the following null hypothesis and its corresponding alternative hypotheses (Appendix B): $H1_o$: The length of academic disruption does not affect the motivation level of TESDA scholars. H1a: As the length of academic disruption from online learning to practical demonstration increases, the motivation level in learning decreases. H1b: As the length of academic disruption from training to competency assessment increases, the motivation level in assessment decreases.

While the world has slowly recovered from the effects of the COVID-19 pandemic era, the result of this study may improve the knowledge necessary to improve future training practices and ensure quality TVET when facing future disruptions.

METHOD

In this case study, we used an explanatory sequential type of mixed method design. Quantitative data were collected from April to May 2023 using Google Forms for online survey questionnaires by convenience sampling. The survey participants were recruited from nine technical vocational institutions in the National Capital Region (NCR) using convenience sampling method. A total of 112 valid responses were collected from TESDA BPP NC II scholars who attended the blended mode of learning during the height of the pandemic from September 2020 to December 2022. The questionnaire contained five sections which included two motivation scales namely: the Academic Motivation Scale adapted from Tanaka (2017) to measure the type and level of motivation of scholars and their use of different learning strategies for skills-based learning; and the Basic Psychological Needs in the Classroom Scale adapted from Conesa and Duñabeitia (2021) to assess the satisfaction of basic psychological needs, including novelty satisfaction. Both instruments used the 5-point Likert scale from

"Strongly Disagree" to "Strongly Agree". It also included the participants' demographic information, relevant data on their scholarship training, and an optional section for comments and suggestions about their training experience. After analyzing the data of the quantitative survey, one-on-one semi-structured online interviews were conducted from July to August 2023 with 18 selected scholars using purposive sampling.

Descriptive statistics were used to determine the motivational orientations within the sample of TESDA scholars towards learning a baking skill. The Kruskal-Wallis Test and Wilcoxon Rank Sum Test were adopted to quantitatively examine the differences in motivation scores among respondents who experienced varying gaps in training, and then a follow-up qualitative survey using one-on-one online interviews was employed to interpret the quantitative findings further.

FINDINGS

Demographic characteristics such as gender, age, education, and TVET client type were verified. From a total survey sample of 112 participants, 100 (89%) were female and 12 (11%) were male, indicating a higher interest in baking among females compared to males (Wolfson , et al., 2021). Most of the respondents were within the age bracket of 26-35 (N=41, 36.61%). This suggests that the desire to learn more about baking is not limited to a specific age group, as both young and older individuals show interest (Lavelle, et al., 2016). A significant portion (39.3%) has completed college education, but most are out of work or school, which allows them to focus on training. From a quantitative study with 112 participants, 18 individuals consented to join a subsequent qualitative study. The majority of the interviewees are college graduates (N=9, 50%), married (N=9, 50%), predominantly females (N=13, 72%), and with a median age of 34 years. The summary of training characteristics of the survey participants and interviewees is illustrated in Appendix C and D, respectively.

Table 1: Descriptive statistics of the motivational orientations

	Mean	Median	Standard Deviation
Autonomous	4.293	4.500	0.885
Controlled	2.966	2.900	0.800
Amotivation	1.820	1.300	1.082

Findings on motivation, as shown in Table 1, revealed a strong inclination towards autonomous motivation among the participants, with lower scores for controlled motivation and amotivation. This suggests a significant internal drive within participants, supporting the principles of Self-Determination Theory (SDT). The psychological needs analysis revealed that scholars experienced high levels of satisfaction across the subscales of autonomy, competence, relatedness, and novelty. This aligns with the principles of Self-Determination Theory (SDT) and Basic Psychological Needs Theory (BPNT), which emphasize the importance of fulfilling these psychological needs for enhancing motivation and well-being (Autin, Herdt, & Ezema, 2021); (Vansteenkiste, Ryan, & Soenens, 2020). This provides empirical evidence supporting BPNT's assertion that satisfying these basic psychological needs is associated with increased intrinsic motivation (Standage, Duda, & Ntoumanis, 2005).

Table 2: Results of the Kruskal-Wallis Test

	test statistic	p-value	Conclusion
Autonomous	2.0786	0.3537	insignificant differences
Controlled	3.5119	0.1727	insignificant differences
Amotivation	5.4320	0.0661	insignificant differences

The table shows the differences in the motivation of groups with varying training gaps.

Moreover, results of the Kruskal-Wallis Test in Table 2 found that the scholars' motivation does not differ significantly regardless of the duration of the training gap. Notably, the study failed to reject the null hypothesis. Contrary to the statement of Grubic, et al. (2020), academic disruption did not result in reduced motivation and a high incidence of drop-out. The respondents were positively inclined to the autonomous motivation subscale both in training and assessment, indicating that most of the students have self-determined profiles despite the challenges brought about by the pandemic.

The Wilcoxon Rank Sum Test examined the differences in motivation among TESDA scholars based on whether or not they underwent an assessment. The test specifically compared autonomous motivation, controlled motivation, and amotivation scores between two groups: those who were assessed and those who were not. The result (Appendix E) implies that the act of undergoing an assessment, or not, does not significantly affect the scholars' internal drive, their response to external incentives or pressures, or their lack of motivation to engage in the activity.

The qualitative findings indicate that the students with autonomous profiles are more persistent in completing the course program. With regards to the investigation into the effects of training gaps on students' motivation to undergo assessment, it was revealed that the timing of the assessment did not significantly alter students' motivation levels. Students remained committed to achieving certification, with the anticipation of assessment acting as a motivator rather than a deterrent, highlighting the role of certification as both a goal and a motivational factor. However, the motivation to undergo assessment is affected by situations that may arise during the given schedule. Together, these results justified that students with high levels of self-determination would lead to positive learning outcomes.

CONCLUSION

The study concludes that autonomous motivation, characterized by an inherent interest in baking and the pursuit of certification, plays a critical role in navigating the challenges presented by the pandemic. Despite potential disruptions, the dedication to acquiring practical skills and work-readiness in the hospitality industry remains strong among TESDA baking scholars. Operationalizing the insights from the scholars, TESDA might focus on designing interventions that support scholars' autonomous motivation across all durations of delays. For those experiencing short-term delays, enhancing controlled motivation through timely feedback and encouragement may be beneficial (Khiat & Vogel, 2022). For those with longer delays, efforts to support and maintain autonomous motivation could include reinforcing the personal relevance and value of the training, as well as offering additional self-directed learning resources (Pelikan, Lüftenegger, Korlat, Spiel, & Schober, 2021). Finally, to avoid an increase in the incidence of amotivation, effective communication highlighting the concrete advantages and future prospects of finishing the training might assist in sustaining students' concentration and motivation to complete their studies (Baranidharan, 2023) despite the obstacles presented by the pandemic.

REFERENCES

Autin, K. L., Herdt, M. E., & Ezema, G. N. (2021, May 20). Basic psychological need satisfaction, autonomous motivation, and meaningful work: A self-determination theory perspective. *Journal of Career Assessment, 30*(1). doi:https://doi.org/10.1177/10690727211018647

Baranidharan, S. (2023). A study of mediating factors influencing student motivation and behaviour: A literature review. *Handbook of Research on Creating Motivational Online Environments for Students*, 260-289.

Conesa, P. J., & Duñabeitia, J. A. , J. A. (2021, March 25). The basic psychological needs in the classroom scale (BPN-CS). *Behavioral Sciences, 11*(96), 1-13. doi:doi:https://doi.org/10.3390/bs11070096

Deci, E. L., & Ryan, R. M. (1985). *Instrinsic motivation and self determination in human behavior.* New York: Plenum Press.

Genc, G., & Kaya, A. (2010). An investigation on the motivation level of EFL students. *International Journal on New Trends in Education and Their Implications*, 20-31.

Grubic, N., Badovinac, S., & Johri, A. M. (2020). Student mental health in the midst of the COVID-19 pandemic: A call for further research and immediate solutions. *International Journal of Social Psychiatry, 66*(5), 517-518.

Khiat, H., & Vogel, S. (2022, April). A self-regulated learning management system: Enhancing performance, motivation and reflection in learning. *Journal of University Teaching & Learning Practice, 19*(2), 43-59. doi:https://doi.org/10.53761/1.19.2.4

Lavelle, F., Spence, M., Hollywood, L., McGowan, L., Surgenor, D., McCloat, A., & Dean , M. (2016, November 14). Learning cooking skills at different ages: a cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity, 13*, Article Number 119. doi:https://doi.org/10.1186/s12966-016-0446-y

Pelikan, E., Lüftenegger, M., Korlat, S., Spiel, C., & Schober, B. (2021, March 4). Learning during COVID-19: the role of self-regulated learning, motivation, and procrastination for perceived competence. *Z Erziehwiss, 24*(2), 393-418. doi:10.1007/s11618-021-01002-x

Ryotaro, H., Garcia, M., Sudarshana, H. D., Jayasundara, A., Balasuriya, A., & Hirokawa, T. (2021). COVID-19 impact on technical and vocational education and training in Sri Lanka. *ADB Briefs , 168*. doi:http://dx.doi.org/10.22617/BRF210081-2

Sanchez-De Miguel, M., Orkaizagirre-Gomara, A., Izagirre-Otaegi, A., Badiola, I., Ortiz de Elguea-Díaz, F. J., Gomez-Gastiasoro, A., & Goudas , M. (2023). Association among university students' motivation, resilience, perceived competence, and classroom climate from the perspective of self-determination theory. *Education Sciences, 13*(2), 147.

Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Educational Psychology, 75*, 411-433. doi:10.1348/000709904X22359

Tanaka, M. (2017). Factors affecting motivation for short in-class extensive reading. *The Journal of Asia TEFL, 14*, 98-113. doi:http://dx.doi.org/10.18823/asiatefl.2017.14.1.7.98

Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020, January 21). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion, 44*, 1-31. doi:https://doi.org/10.1007/s11031-019-09818-1

Wolfson , J. A., Ishikawa , Y., Hosokawa , C., Janisch , K., Massa , J., & Eisenberg , D. M. (2021, June 1). Gender differences in global estimates of cooking frequency prior to COVID-19. *Appetite*, 161. doi:https://doi.org/10.1016/j.appet.2021.105117

ACKNOWLEDGEMENT

We would like to acknowledge the University of the Philippines College of Home Economics which funded this study under a grant.

APPENDICES

Appendix A

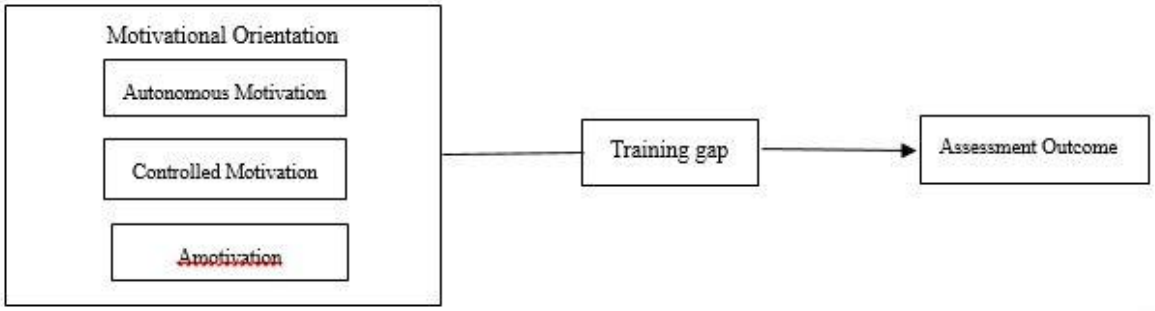

Figure 1: Conceptual Framework

Appendix B

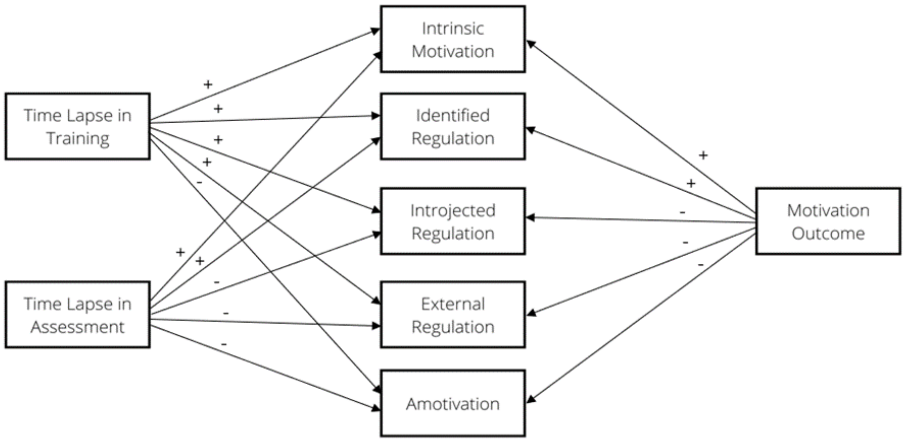

Figure 2: Hypothesized model of motivational processes

Appendix C

Table 3: Summary of training characteristics of survey participants

Training Characteristics	Number	Percentage
Scholarship Type (N=112)		
TWSP (Training for Work Scholarship Program)	47	42%
TTSP (Tulong Trabaho Scholarship Program)	41	37%
STEP (Special Training for Employment Program)	24	21%
Training date (N=112)		
Between September 2020 to Oct. 2021	26	23%
Between November 2021 to May 2022	38	34%
Between June to December 2022	48	43%
Time-lapse from online Training to Face-to-face training (N=112)		
With time lapse	57	51%
Without time lapse	55	49%
Duration of Training Time-lapse (N=57)		
One month (30 days or less)	45	79%
Two months (31 to 60 days)	7	12%
Three months (61 to 90 days)	2	4%
More than 3 months (more than 90 days)	3	5%
Did you finish your training? (N=112)		
Yes	110	98%
No	2	2%
Time-lapse from training to assessment (N=110)		
With time lapse	56	51%
Without time lapse	54	49%
Did you undergo the mandatory competency assessment? (N=110)		
Yes	92	84%
No	18	16%
Duration of Assessment Time-lapse (N=110)		
One month (30 days or less)	93	84%
Two months (31 to 60 days)	7	6%
Three months (61 to 90 days)	5	5%
More than 3 months (more than 90 days)	5	5%
Assessment result (N=92)		
Competent	91	99%
Not yet competent	1	1%

Appendix D

Table 4: Training characteristics of interview studied population

Participants	Learner's profile	Training date	Duration of training gap	Duration of assessment gap
P1G1	NEET	May 2022	None	2 weeks
P2G1	Displaced worker	Nov 2022	None	1 week
P3G1	NEET	Aug 2022	None	4 months
P4G1	NEET	July 2021	2 months	4 months
P5G1	NEET	Dec 2020	6 months	5 months
P6G1	Micro-Entrepreneur	Sept 2020	5 months	5 months
P7G1	NEET	May 2022	None	2-3 weeks
P8G1	Micro-Entrepreneur	July 2021	2 months	2 months
P9G1	Micro-Entrepreneur	Dec 2020	6 months	5 months
P10G2	NEET	Sept 2020	5 months	9 months
P11G2	NEET	July 2022	None	None
P12G2	NEET	Nov 2022	None	None
P13G2	Displaced worker	Sept 2020	5 months	9 months
P14G2	Currently employed	Nov 2021	None	1 month
P15G2	NEET	Aug 2022	None	4 months
P16G2	NEET	Dec 2020	6 months	5 months
P17G2	Currently employed	Aug 2021	1 month	4 months
P18G3	Person with Disability (PWD)	Apr 2022	None	N/A

*NEET (Not in Employment and Education) includes repatriated overseas workers and displaced workers due to COVID-19.

Appendix E

Table 5: Results of the Wilcoxon Rank Sum Test on the differences in the motivation of gro ups with different assessment outcomes

	test statistic	p-value	Conclusion
Autonomous	1151	0.0783	insignificant differences
Controlled	1161.5	0.0668	insignificant differences
Amotivation	886	0.7938	insignificant differences