

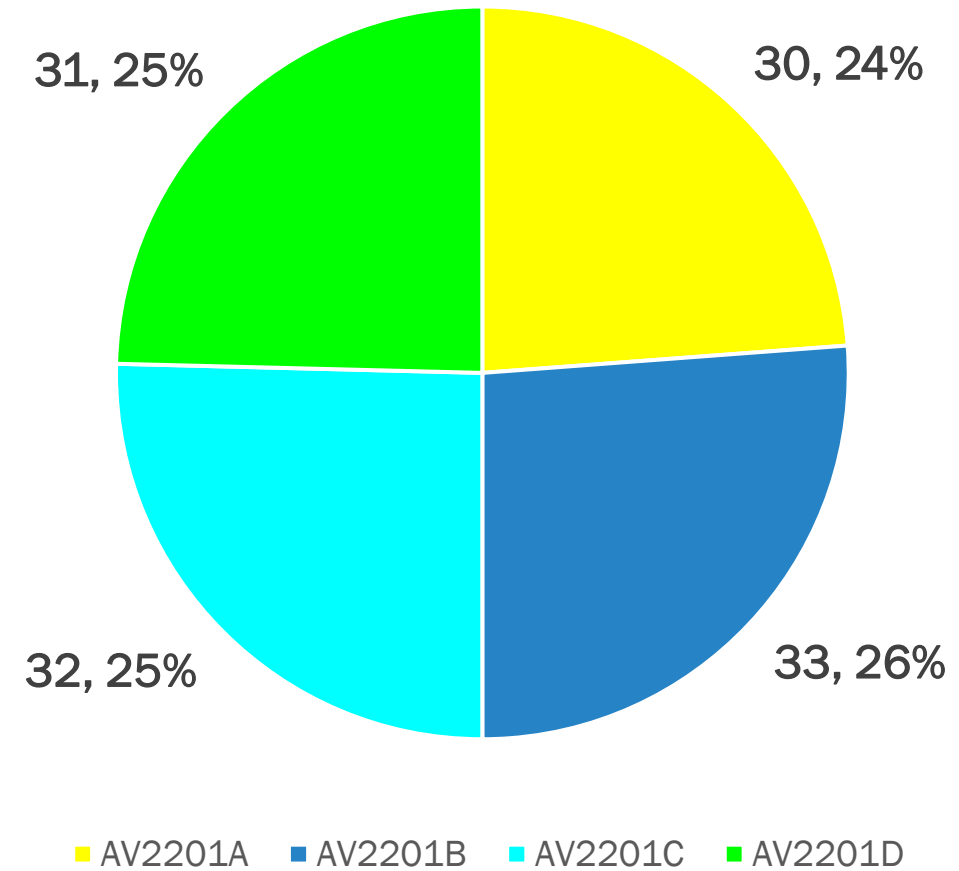


Unlocking ITE Aerospace Programme Success: Insights On Airbus Competence Trainer (ACT) Software

**INSTITUTE OF TECHNICAL EDUCATION
SINGAPORE**



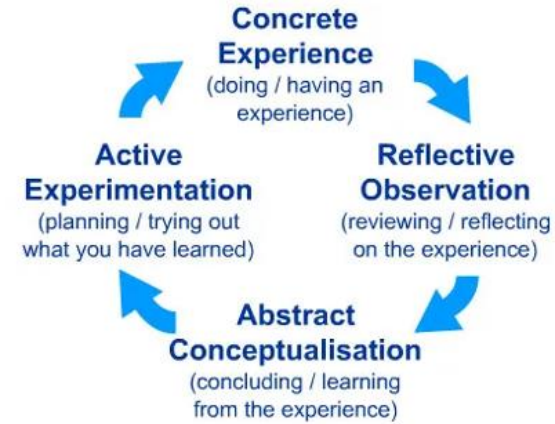
STUDENT INVOLVEMENT



SURVEY QUESTIONS



Figure 1 Kolb's Four-Stage Learning Cycle



Concrete Experience:

Entails new experiences or situations that are encountered by the learners, or the reinterpretation of existing experiences.

Reflective Observation:

Entails the individuals reflecting upon any inconsistencies between their experiences and understanding.

Active Experimentation:

Entails the learners apply their idea(s) / knowledge to the world around them to see what happens.

Abstract Conceptualization:

Entails the individuals' arriving at a conclusion that will give rise to new idea(s) / knowledge, or a modification of existing abstract concept(s). That is, individual have learned from their experiences.

RELIABILITY OF SURVEY INSTRUMENT



Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.968	.968	12

Overall Instrument Cronbach's Alpha Reliability Coefficient .97

The alpha coefficient for the whole survey instrument is **.97**.

It can be said the survey instrument is **very robust in assessing the students' perceptions correctly**.

Concrete Experiences for Students



Fig. 1 Practical Experiences

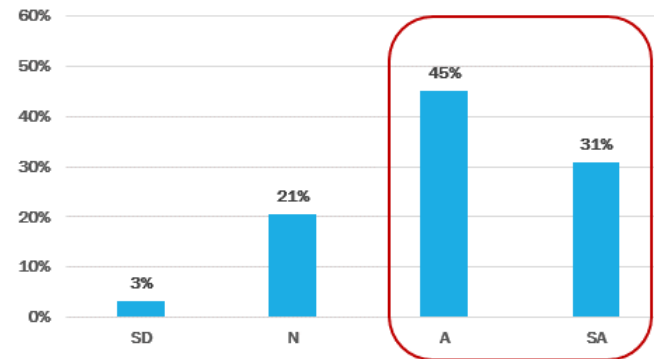


Fig. 2 Concrete Experiences

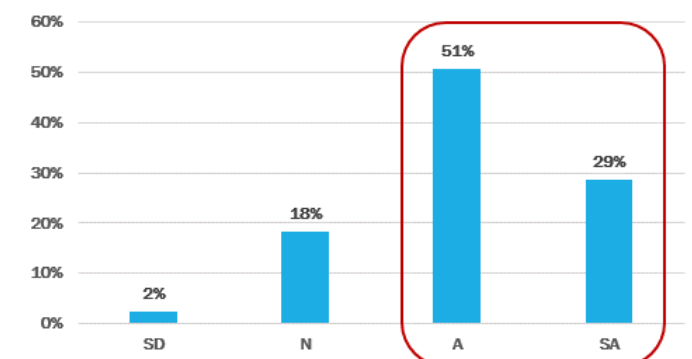
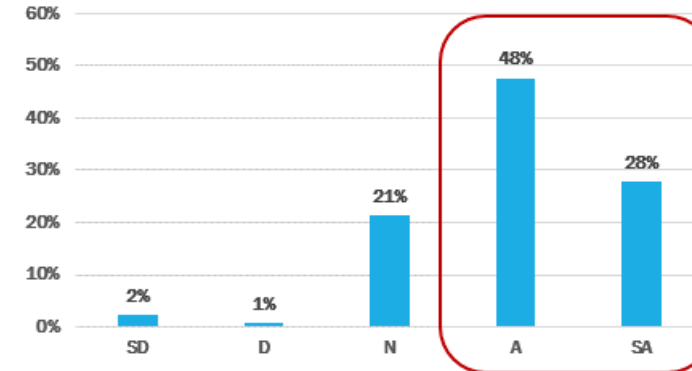


Fig. 3 Real-world Experiences



The ACT has offered them practical experiences, aiding their comprehension of module skills and knowledge, while also delivering tangible insights into the A320 System and a genuine "real-world" connection to the module.

Reflective Observations by Students



Fig. 4 Meaningful skills & knowledge

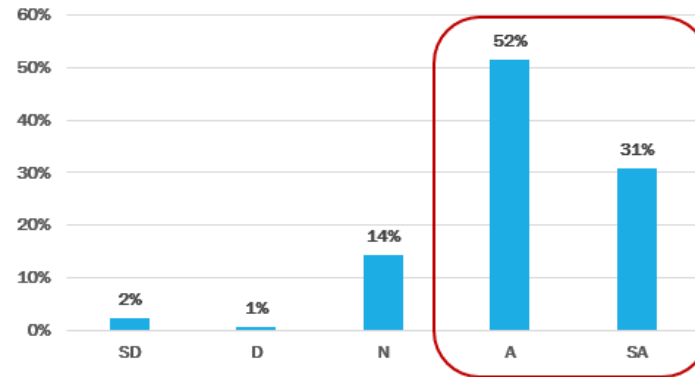


Fig. 5 Personal experiences to the module content

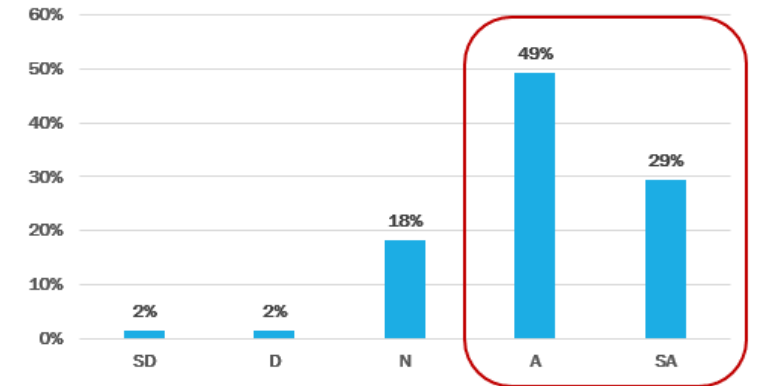
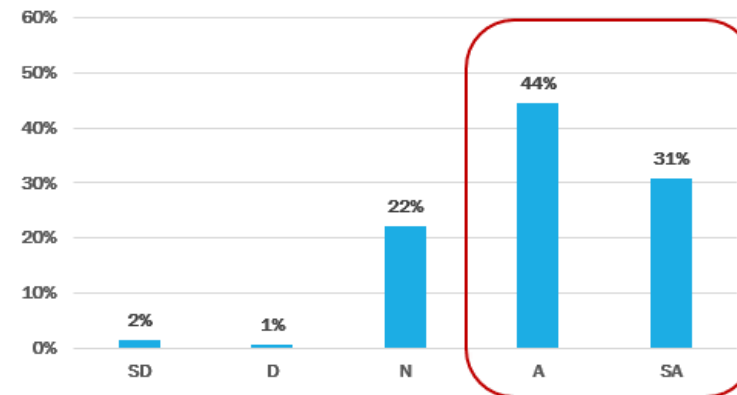


Fig. 6 Connection between current & past modules



The ACT has prompted them to reflect on the significance of the acquired skills and knowledge during their Industry Attachment. This has also enabled them to link their individual experiences with module content and integrate prior learning from other modules.

Abstract Conceptualization for Students



Fig. 7 Use of skills & knowledge

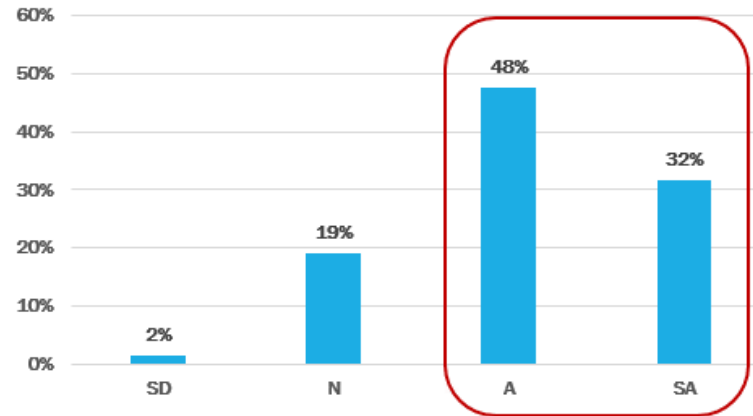


Fig. 8 Interconnectedness of skills & knowledge

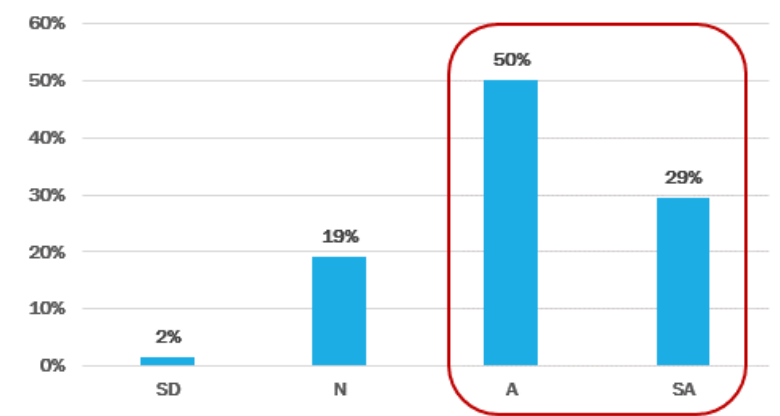
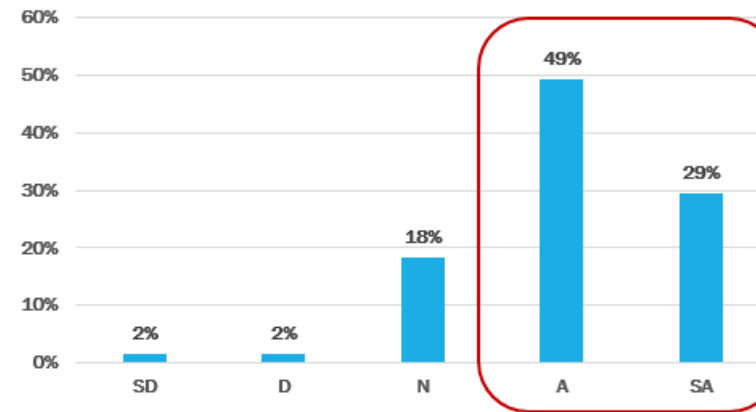


Fig. 9 Meaningful learning



The ACT has prompted them to apply their acquired skills and knowledge accurately, encouraging them to recognize the interconnectedness of these elements with other modules, while fostering a deeper understanding that transforms their acquired skills and knowledge into personally meaningful and impactful learning experiences.

Active Experimentation by Students



Fig. 10 Trying out new skills & knowledge

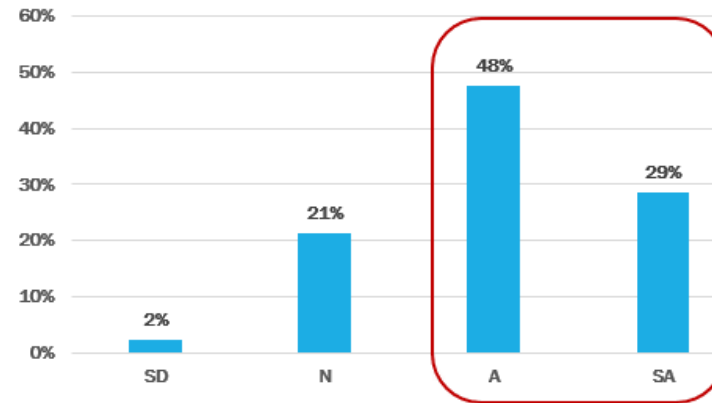


Fig. 11 Testing of new skills & knowledge

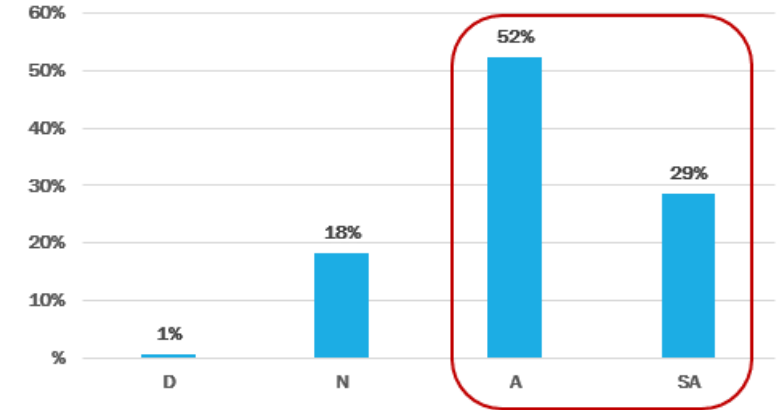
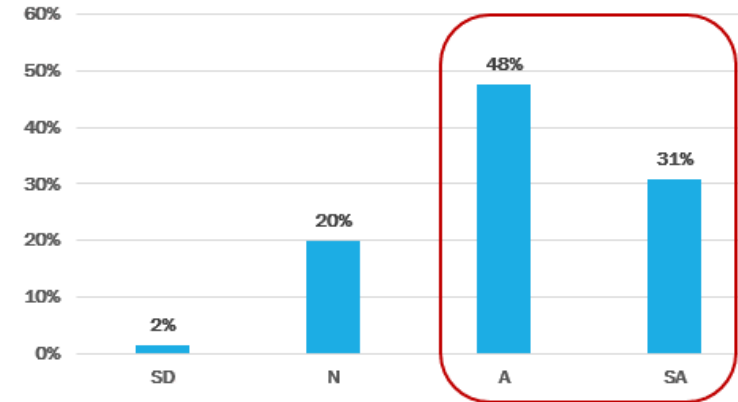


Fig. 12 Experimenting with new skills & knowledge



The ACT has empowered them to independently explore and apply their acquired skills and knowledge, enabling them to actively assess the cross-module applicability of their ideas and experiment with diverse ways to effectively employ these competencies during their Industry Attachment.

SURVEY FINDINGS



ANOVA					
Between Groups: AV2201 A / B / C / D	Sum of Squares	df	Mean Square	F	Sig.
CE_1	.586	3	.195	.237	.870
CE_2	.936	3	.312	.448	.719
CE_3	2.933	3	.978	1.325	.269
RO_1	.984	3	.328	.464	.708
RO_2	1.785	3	.595	.864	.462
RO_3	3.594	3	1.198	1.713	.168
AC_1	2.659	3	.886	1.377	.253
AC_2	1.086	3	.362	.569	.636
AC_3	4.754	3	1.585	2.383	.073
AE_1	2.118	3	.706	.980	.405
AE_2	4.078	3	1.359	2.861	.040
AE_3	1.794	3	.598	.915	.436

$P > 0.01$

The results revealed greater p-values (>0.01) which indicate there are **no differences** across the four classes.

In other words, the 'ACT for Academy' training package is a robust and consistent platform such that students have benefitted equally from an integrated solution of training material across the 4 classes.

IMPLICATIONS

Strengthen the fundamentals



Realizing their potential



Train future-ready generation



Continual Collaboration with Industry Partners



Continuous Improvement



ITE RESEARCH TEAM



Dr. William Choy
Senior Head
Mentoring & Professional
Development (Research)
ITE Headquarters



Mr. Foo Wing Yong
Deputy Director
Engineering Services
ITE College Central



Mr. Chia Kiah Ngian
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